

FOOD FUNDAMENTALS

E. H. BEAN
D. O.

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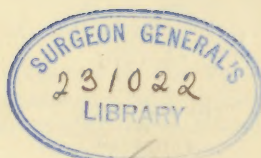
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FOOD FUNDAMENTALS

A DISCUSSION OF FOOD BASED ON
EXPERIENCE, FROM THE VIEW-POINT
OF AN OSTEOPATHIC PHYSICIAN
TOGETHER WITH A STUDY OF ILL-
HEALTH CAUSED BY

WRONG HABITS OF LIVING



kind
E. H. BEAN, D. O.

5 October, O. 1916]
(Scars & Simpson)

Annex

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1918

TO MY MOTHER

Who is seventy-five years of age and has never been ill.

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PREFACE SECOND EDITION

The first edition of Food Fundamentals was prepared chiefly for the author's own use in his practice, as a convenient means of instruction in matters of food and diet. To his surprise and pleasure it was cordially received not only by his patients but by physicians and a considerable number of the general public, among whom it was scarcely expected to circulate. The exhaustion of the first edition is evidence that the message sent forth has found practical application far beyond the limits of the author's practice; and the necessity of publishing a second edition has afforded opportunity for a revision of the text in preparation therefore.

It is found that the book is being extensively used as a household guide, and that moreover it is being read and its truths absorbed by those of tender years. These facts have been kept in mind in the revision and have largely determined its character. Every page has been carefully scrutinized; not a little new matter has been added, and some of the old omitted; all with the purpose of presenting the fundamental truths more clearly and thus increasing the usefulness and availability of the volume. The two editions are substantially the same, there being no essential differences. The work does not claim to contain the solution of all dietetic problems. If it has one chief merit it is that of causing people to think for themselves, for "action is born of thought."

Material assistance in the revision has been rendered by my classmate and colleague, Dr. Paul S. Nichols, to whom grateful acknowledgement is hereby made.

E. H. BEAN.

Columbus, Ohio, October, 1918.

PREFACE

Only those who have freed themselves from the habit of thinking in the ordinary and much worn channels turn to osteopathy as their profession. And in the earlier days of osteopathy this applied with even greater force than it does now. The author spent three and one-half years in Kirksville, Mo.; the first half year to regain sufficient health to enter the school, and the remainder of the time to take the course in osteopathy. During this time he greatly profited by his close association with Dr. A. T. Still, the Founder of Osteopathy, who chose to make use of the author's services in getting out "Osteopathy, Research and Practice," Dr. Still's latest work. Whatever was left the author of mental narrowness, biased opinion, prejudice in thinking, or following the customary paths of mental activity received a forcible and lasting rebuke when he began to comprehend that wonderful mind, expanded by original thinking, a mind which found it easy to soar into the clouds above ordinary thought—that master mind of Dr. Still. His words are still ringing in the author's ears: "Keep your mud valves open and your engine in such condition that you can move out of the hearing of theories, and halt for all coming days by the side of the river of the pure waters of reason and be able to demonstrate that which you assert."

The author having been educated as a teacher and having followed that profession for ten years, it was only natural that he should try to answer the questions addressed to him as a physician in a manner that would readily convey his own point of view. To keep constantly doing this led to ceaseless observation, extensive investigation, and an endless amount of reading.

A life-long battle with stomach and intestinal trouble impelled him to an open mind regarding the

importance of a properly selected diet. From the beginning of his practice he supplemented his osteopathy with diet along lines indicated in this work. He believes his percentage of cures has been materially increased and his sphere of usefulness greatly enlarged by his attention to the diet of his patients. His views as to disease, diet and osteopathy have not always been readily accepted by his clientele. They have kept him constantly awake and alert to what is going on in the different fields of medicine, and as time passed he found himself as truly engaged in educational work as though he were spending every hour of the day in the schoolroom.

The author found that people could not or would not follow any diet rules at all comprehensive unless reduced to writing. Hence for years he has refused to give dietary instructions except in writing. Having the principles constantly before his patient he was able to give them specific details easy to grasp and carry out. But this required much additional explanation. This book is the result of the fearless acceptance of truth by an open mind, and of experience gained through a practice along these lines. It was written primarily for those with whom the author comes in professional contact, for it requires personal effort on the part of the physician, personal instructions frequently repeated, to bring about a change in the patient's usual diet. The presentation of these dietaries and the point of view are new and may appeal to some physicians who might well teach them to their patients. If a single physician should make such use of them the author will be amply repaid for putting them in this form.

The quotations used have been gleaned in an unusual way. They are not an unbroken section of the writings from which they were taken, but a collection of short passages, rearranged and assembled with slight omissions or additions or changes necessary for the present arrangement, and because of this the customary markings showing just where the passages came from could not well be used. Care has

been exercised to use these assembled quoted expressions in such a way as to carry their original meaning, and to give credit in each case. Certain expressions and phraseology taken from "Christianizing the Social Order," by Walter Rauschenbusch, have been used in such a way as to make the proper markings difficult, so this indirect acknowledgement is made and credit given.

E. H. BEAN.

Columbus, Ohio, June 28, 1916.

PART ONE

VIEWPOINT AND GENERAL PRINCIPLES

A work of this character will be given consideration only by the few. People will read extensively on almost any subject except health. They will read carefully a short magazine article along this line if written to entertain rather than to instruct; or, if it discusses in a light vein the curative power of some medicine it will be read with due reverence and awe, and will be considered of particular value if it is amply colored with superstition. Too much of the literature on health topics is fragmentary, consisting of the advancement of one meritorious idea with no thought nor notice of its relation to other vital conceptions. Too much of it is wholly false and results in increasing the total amount and severity of illness. Much of it is written from a wrong point of view. Literature characterized by such weaknesses prepares the reader for a ready acceptance of quackery and pretension, not as practiced by known charlatans, but by impostors with a high standing in society and the community.

Of the vast amount of literature published concerning health and the cure of disease, much is not fundamental. And such superficial and incomplete articles are intended for a public a large proportion of whom have not as yet gained so much as a glimmering notion about the underlying principles of the subject. A few authors have published a limited

number of books on this subject which do in fact deal with fundamentals, and a study of such literature should constitute a part of the education of every child. The author would not attempt to make a complete list, but a few of those from whom he has gained much that must be considered basic are Louis Cornaro, Dr. Dio Lewis, Dr. E. H. Dewey, Dr. Daniel Sager, Dr. J. H. Tilden, Dr. J. H. Kellogg, Hereward Carrington and Horace Fletcher.

Louis Cornaro, an Italian, wrote a few essays about three hundred and fifty years ago telling how he regained his health at forty and retained it. He lived past the century mark still hale and hearty. His work or its translation is found in most public libraries and should be in every home. It deals with one fundamental which is very much up-to-date.

"Our Digestion," by Dio Lewis, was written in 1872, but as it deals with sensible and elemental ideas it will always be standard information, and is much in advance of most current literature of today on health subjects.

"The Art of Living in Good Health," by Daniel S. Sager, is replete with valuable information. It is written in a calm and studied tone; is concise and well indexed. People who read this thoughtful book will be warned against falling an easy victim to many of the medical and surgical practices of today.

"The No Breakfast Plan and the Fasting Cure," by E. H. Dewey, is a book with a message conveying a wider impression and purer conception of truth. It is for all the people, not alone for physicians.

The writings of Dr. J. H. Kellogg are illuminating and helpful to those who are able to separate the good from the evil in them.

Dr. J. H. Tilden, of Denver, Colorado, is a prolific and virile writer, daring and bold, a strong force for right thinking on health subjects. His books on "Food," "Diseases of Women," "Criticism of the Practice of Medicine," "Care of Children," and "Impaired Health," are all valuable, and correct many of the prevalent wrong impressions about modern medicine.

Whatever else may be found in the writings of these men, there stand out prominently in the works of each, one or more ideas easily recognized by the discerning mind as basic truths. No writer on this subject is wholly right, because there is more to be learned and the viewpoint must be perfected. A high point of view and a thorough understanding of the underlying principles having been gained, the weakness of any author is easily discovered and the usual discussion of diet and health under various names may be readily classified, or disregarded. There is a tendency to neglect much needed information regarding food and its proper selection, for the field is so large that though the attempt is made, it is not altogether easy to decide what is truth and what is falsehood. But the foregoing is a safe list of books some of which every parent should read. They are not the only ones, but others may not be substituted for all of these with safety lest we have blind leaders of the blind. Because physicians so often persist in closing their minds to any but a narrow, biased consideration of things pertaining to health, parents must discover for themselves an authentic source of specific advice

in these matters and the right direction in which to look and move. They must give thought to this subject. They must not expect to find all they need in a magazine or newspaper article.

It is necessary for us all to recognize that the mass of physicians of all schools are ignorant of the fundamentals put forth by the great physicians of all ages on the prevention and cure of disease by right eating and right living. Not even the best medical schools offer such information to their students. The medical profession is crazy about germs and serums, and their schools turn out doctors crazy on the same subjects. After leaving school the doctor must find out as best he can about diet and right living, and how these may prevent or cure disease. Few give time to securing this information, once they have entered practice.

People do not give sufficient thought to the care of their own health or that of their children. They are paying some physician to do their thinking for them. The ignorance of the general public on this subject is so great that almost anything if entertainingly written may find its way into newspapers, magazines and even books, and be received by their readers with almost unanimous approval. "Ignorance in preparing and combining foods is universal, and ignorance of a need of knowledge on this subject is almost universal." (Tilden). "It is inconceivable, the ignorance of people about their food. Not one man in ten knows anything about it beyond the fact that certain things taste good, and certain other things do not taste good." (Dio Lewis).

In this day of health cults and isms, born because of the signal failure of medicine with its domineering

methods, it is incumbent upon the head of the household to possess knowledge at first-hand concerning health conservation, and to be guided by such knowledge in making the choice of a family physician. The choosing of a doctor in these days is rather the selection of an individuality than of a representative of some certain line or method of healing. A few of each "school" of medicine have properly prepared themselves for the task of teaching people how to live. The wise will seek until they have found such a one to serve them in the capacity of physician. Whatever his method of treatment, if it lacks this essential preparation it is radically deficient. That physician who wields successfully a reliable method of therapeutics, joins with it knowledge and experience as to how health is regained and maintained by right living, and possesses ability as a teacher of his clientele in these matters, becomes a citizen of unusual value to any community. To attain this standard requires a pure brand of absolute honesty—honesty with one's self, honesty in thinking—a quality all too rare in the profession. For instance, how many, many physicians remain silent about vaccination though they know it is wrong, excusing their attitude upon the plea that they can thus be of more use by securing certificates of exemption for a few, than by asserting their convictions in the face of organized and commercialized medicine. Such conduct exhibits a lack of sterling integrity, and the illustration could be many times multiplied.

The physician who fully grasps the fact that disease is largely a product of wrong habits, and undertakes to teach this truth, is met not only with listless

hearers, but with the opposition of a strongly entrenched medical profession which thoroughly understands the use of the public press, and is encountered by the daily remarks of editors and other leaders of public thought who repeat and thus unwittingly reinforce error. By refusing to teach buncombe instead of truth, he loses good patients, good money and good friends, but he builds character. To successfully combat the wrong habits of his patients requires a generous endowment of common sense and an intimate acquaintance with the science of nutrition, and there are not many physicians looking for the job. It is a great task demanding great faith and undying zeal. It does not increase the profits but brings down anathemas from his professional brothers, and from friends and relatives of the patient. Such a physician never gets the recompense to which he is entitled. He belittles himself through his wisdom instead of haloing himself with popular approval and surgeon's instruments. Humanity revels in being taken as near death's door as possible without dying and will pay a great fee for the experience. No one knows so well how people will resist a routine of rest in bed and a light diet (except as an accompaniment of surgery) as does the physician who has prescribed such treatment.

People are looking for a cure in a bottle, or in a bath, or in electricity, or in milk, or in a manipulation, or what not, and to any of these must be added a little sophistry and superstition. "Humanity, as it now exists, does not want to be told how to live. The cry is for a bottle of medicine, and not for advice." (Daniel S. Sager). Human frailty must limp up and

plead guilty to an overmastering tendency and desire to be relieved of illness without being disturbed in its customary manner of living. And to sleep, eat, work and indulge as one may desire, appeals with such a very sweet reasonableness that it is usual for those who become ill as the result, to be permitted to "drowse on with the sleeping dogs whom none cares to stir." Instead of making proper investigation for themselves, sick people are prone to follow each and every suggestion of friend or stranger. It does not seem to be a matter of any importance how ignorant of the body or the laws of health the promoter of the idea may be. It is some easy way of obtaining health that appeals, some short-cut that will permit the sufferer to continue his usual indulgences.

It does not require much space to state what is necessary for each person to know about foods, but it requires much effort and time to set people thinking in right channels, to eradicate their wrong notions, to remove their prejudices, and to make them realize the importance of giving attention to dietary measures and right habits of living. This is the real problem of the physician.

Many are found willing to change their habits of living and eating, when freed from a few false notions and shown the reason for the change. There is profound relief in knowing there are always in any community a few who keep within hailing distance of common sense. We are not far from the time when many will be willing to pay physicians to teach them so to live that they may remain well. Not a few, however, having seen the light still choose to indulge as

of old even though they lessen the number of their years here on earth.

People will not think and act along lines of health until their thought concerning disease has been revolutionized and their minds freed from their implicit faith in falsehoods, some of which have been knit into every fiber of their being from infancy, and about which the roots of their faith are coiled as the roots about the clump of earth in a flower pot. Living a healthful life is an individual matter, and none can ever know just what another should do. But there is enough known to disclose the fundamental lines along which we must move to leave behind antiquated and harmful customs, the "policy of tinkering and palliatives." We can point the direction leading to a plan revolving around a different axis, and carrying with it a conspicuous glow of virtue.

GERMS

There is today no greater obstacle to correct teaching regarding health and disease than the erroneous germ theories. There are germs, to be sure; germs that are peculiar to the conditions called typhoid fever, pneumonia, etc. But the part played by the germ in disease or in health is very generally misunderstood. If the terms in all our literature referring to germs, microbes, etc., as causing disease could be erased and the term poison substituted, the idea conveyed would more closely approximate the truth. This difference is fundamental both in conception and in application. The ordinary conception and teaching being that the proliferation of poisonous germs within the body causes the disease, every effort is put forth to kill them. It is the accumulation of poisons and not that of germs within the body that does the damage, and curative efforts should be directed to prevent the collection of these poisons. Measures that will prevent and do away with this accumulation are very different, indeed, from those used to destroy germs. Those curative measures will be most effective which are directed to the elimination of poisons from the body rather than to the extermination of germs.

It is taught by many that before a germ can cause disease there must be a lowered resistance of some or all of the body tissues. The author believes the lowered resistance is disease and is present before the poison germ makes its appearance. That which brings about the lowered vitality is the cause of the disease.

The sources of disease may be classified under two general heads: first, errors in mode of living; second, the osteopathic lesion. A brief explanation of this lesion as a cause of disease, and of osteopathy as its treatment is given elsewhere in this book. (Page 33).

These are the things that reduce the vitality, lower the resistance—bring about disease. The germs may be regarded as scavengers, but this is only a fragmentary idea of them. They may also be regarded as helpful workers in dissipating disease processes. It is their business to take up or ingest poisonous or waste material and so to change and surround this material as to make it least harmful to the elements of the blood, the lymphatic fluid, and the nervous system. It has been shown that the typhoid germ is often present without typhoid fever. The same thing is true of the germs of tuberculosis, pneumonia, gonorrhea, syphilis, etc. The entrance of these germs into the body does not necessarily mean disease. They are not always pathogenic.

When the body's resistance is lessened, elimination is restricted, and the fluids and secretions become poisonous. The ingestion of these poisons by germs render them less harmful to the body, but in spite of this fact, and overlooking entirely our own offense in the matter, we blame all of our distress upon the germs. After it has been ingested and changed by the germs, the white blood cells carry away more poisons, and it is less harmful to them than if they were to attack it directly. The white cells had better be regarded as "white angels" than as "policemen," as some physiologists represent them.

It is barely possible that in some few cases the dissolution of the tissues in disease may be so rapid and the multiplying of germs so furious that it would seem their enormous production menaced life and health. But if the underlying condition is brought to light and properly interpreted it will be seen that such a danger is remote. It is well to look upon such an interpretation of symptoms with reserve until evidence against the germ is more conclusive than that offered today. The sluggish, filthy sea of poisonous secretions in which the millions of germs are found wallowing is not usually of their own making, but is rather the physiological result of a depleted system overwhelmed by forced feeding and the resultant accumulation of poisons. A very good and sufficient proof of the above, and one acceptable to those searching for truth regardless of its source, is exemplified by taking away food from one in such a condition, and instituting proper eliminative measures together with osteopathic treatment.

The germ does not determine the character of the disease. The channel and method of elimination, the membranes chosen by the system for that duty, the breaking down of some organ because poisons are retained in it, are factors that determine the character of disease,—the symptoms that become manifest.

In all diseased conditions there is an accumulation of poisons. These must be eliminated. If the ordinary means are inadequate then some tissue is employed whose function is such that it can act in the place of other eliminating organs and accomplish the immediate demands. The tissues so used are most often the mucous membranes. If the small intestines

are enfeebled by overwork, the resulting wrong functioning may take the form of typhoid fever. In such an extreme emergency nearly every membrane of the body is called upon to help bear the burden and to do more than its usual work. Too often the physician attempts to make these tissues stop this work. He treats symptoms. The typhoid germ is busy in the intestinal glands because it is well adapted to work under the conditions there present, and can live longer than can other germs on the poisonous food found therein. But there are also other germs in the intestines working just as steadily as the typhoid germ. These are ignored as a cause of the disease. Why? Because they are also found elsewhere in the body. They are among the kinds that can work anywhere.

Measles, mumps, scarlet fever, and all the so-called contagious diseases are no more contagious than pneumonia or catarrh. If a man has a carbuncle and a fever and you inhale his expired breath you will be poisoned. It may or may not make you sick. If it does you will probably think you have taken cold. People usually excuse some symptom they do not understand by saying, "I think I caught cold." If you inhale the breath of a person ill with measles you will be poisoned, whether or not you yourself have had the disease. Measles results from effete material accumulated in the body by overeating, wrong eating, deficient elimination and an excess of clothing, together with a condition of the atmosphere which burdens the skin and mucous membranes. That is all there is to the "contagion" idea in any disease. The several members of a household will live similarly and are likely to have the same diseases. Predisposition to illness is greatest

when people have fed themselves on winter foods during the warmer part of the winter and spring as well as during the colder part. The air at this season becomes warmer and damper, and there is lack of sunshine and green vegetation to purify it. Decomposition of grass, and of the foliage of shrubs and trees becomes profuse and the air becomes poisoned with its products. Because of too much clothing the elimination by means of the skin is impaired. Thus the whole family or the whole neighborhood becomes ill, and why not? But the germ is still helpful and is not the disease-producing agency.

Immunity from second attacks of measles and other so-called contagious diseases is just as easily explained from this viewpoint as from any other. The fact is, people do have measles and small-pox more than once. But that the body builds a resistance against all diseases cannot be questioned. And that it sometimes succeeds in so fortifying itself against certain poisons that they can never again produce the same results cannot be disputed. The author thinks this occurs in many more cases than is usually supposed. No doubt this is often true in typhoid, pneumonia, etc. The person who has once had measles, and who again subjects himself to bad habits of eating and living, and to the climate and exposure that once produced it, does not escape the penalty of his transgression, whether it be measles or other disorder. The body's resistance to the poison may be so great that the same amount of elimination is not called for that was needed when the body first yielded, but the extra poison will demand additional attention. From this point of view how absurd it is to reduce the

alkalinity of the blood by vaccination, the worst of all being that used against smallpox. The results claimed through anti-typhoid vaccination do not prove that the disease is caused by a germ. The most significant result attained by such procedure is that this measure is followed by less drugging. Less drugging and more sanitation explain the results now being gained in the prevention of typhoid fever. It is not altogether through killing the mosquito that malaria has been banished. Drugging and draining the marshes may have done away with the mosquito, but it has done more; it has purified the air from decomposition products, and therein is the explanation of the results.

The following quotations appeared in a recent review of a late book by Henry Savage Landor entitled "Across Widest Africa":

"Personally, I have been stung thousands of times by mosquitoes in malarial countries, and did not suffer from malarial fever to any mentionable extent, although I took no preventives, such as quinine, etc.; but the only place where I did suffer from bad fever was in the Persian Desert some years ago, where I did not see a single mosquito for many months.

Although we were stung thousands of times all over the body, at this place and others upon the river, none of us got malarial fever, yet these were the very mosquitoes (anopheles) which were supposed to be carriers of malaria."

Internal sanitation is needed as much as external. A foul breath is not only repulsive, but poisonous. Those who are compelled to patronize poorly ventilated, overcrowded, overheated street cars suffer far more from the foul and poisonous human exhalations than from any germs upon the hanging straps.

The medical profession is now finding it very hard to undo the work of false teaching that has been promulgated in the name of medicine. If the principle of prevention might be applied to the educational field of medicine, some of the teachings now being foisted upon the public would suddenly be abandoned and truth substituted. No errors will be more difficult to eradicate than those concerning germs, stimulants, sedatives, and foods. When at last the medical profession discovers it is promulgating a wrong idea the blame is laid on the advertising doctors. But it should be observed that the advertising doctors are in such instances only perpetuating the erroneous teaching begun by the "ethical" members of the profession. For example, they perpetuate the fallacy that backache is caused by kidney derangement. The medical profession originated the theory, but now they recognize it as erroneous. So it has been with many other medical "discoveries."

The theory that germs cause disease has been implicitly accepted by the public at large, and certain good has resulted. There has been improvement in sanitation and hygiene—an advance to be commended. There is, however, no greater menace to the health of the people than the present-day teaching on this subject. The exaggerated statements in regard to germs have led the attention astray from the real causes of disease and have resulted in blind efforts to palliate and relieve, involving an unfortunate neglect of the bracing of the will against the continuance of unhealthful habits of living. Wrong teaching in regard to germs has instilled into many minds a poisonous fear which is in itself detrimental to health.

"In this connection the question may arise as to the influence of germs or microbes in disease. Germs or microbes of whatever character are powerless to injure a healthy man. If this were not so we should all die of germ diseases, for we live in an atmosphere of germs, breathing tuberculosis, diphtheria, scarlet fever, measles, etc. It is only when the body is reduced or brought down from its high plane of vigor and vitality to a low level that it yields to the influence of noxious microbes.

If tubercle germs are injected into the skin of a healthy man he will not suffer in the least, and undoubtedly, as has been proved, a healthy individual can swallow various germs and suffer no ill effects.

In many instances it is a question whether germs are not a result rather than the cause of disease. The germs themselves are not so poisonous as their toxins or excreta.

There are many points about disease yet remaining to be solved. We know that in many instances the bacilli of diphtheria may be found in the mouth of an individual and long remain harmless to him. This may go on for an unlimited period, or these bacilli may suddenly take an active or malignant form from causes which seem to be as yet beyond our understanding. Unquestionably the body of a healthy man has the power to destroy any or all germs or microbes. Many of the so-called disease germs, the bacilli of consumption, typhoid fever, and others, have had an existence for centuries, and they will still continue this existence so long as time lasts, for they form an integral part of the life of plants. Just as a tree is not killed by cutting off its leaves, neither is consumption, diphtheria, pneumonia, or any other so-called germ disease prevented by destroying the bacilli. We live in a world of germs, and we know absolutely nothing of many of the forms of germ-life, because we have no microscopes sufficiently powerful to show them; but this does not prevent us from knowing that these

minute forms of life exist,—we know they exist by their effects on plant and human life. This only emphasizes the importance of cultivating habits of good living for the sake of absolute immunity. By a well regulated natural life we can keep our bodies in such condition that they will resist disease of any kind.”

(DR. DANIEL S. SAGER).

“That these germs are actually present I do not for one moment deny. Their presence within the system, on such occasions, is not the cause of the disease, but merely one of its accomplishments. If they are the cause they must be present before the disease appears. Dr. R. L. Watkins examined the evidence showing germs are not present before the disease, and says: It is claimed that these bacilli are carried to the tissues by the blood, . . . it is acknowledged that they have never been found in the blood. Dr. Lionel S. Beale also contended that there was no evidence whatever for the belief that the bacilli invariably existed first, while there was strong evidence to the contrary. A. H. Hoy, M. D., in “Eating and Drinking,” holds the idea that we are breathing, eating, drinking germs all the time at the rate of some 14,000 per hour. We cannot possibly keep them out of any system; the most healthy body doubtless contains the germs of the above mentioned diseases—if not this minute, then probably the next, or the next—for we eat, drink and breathe them constantly. Why, then, do we not all have typhoid, and consumption, and cholera, and diphtheria? Simply because there is no suitable soil in our bodies in which they can flourish; no food material upon which they can sustain themselves; and that is the sole and the only reason why we do not all have these diseases, and all others supposedly caused by germs.

Now, as the prime object in the cure of all diseases is the elimination of offensive material; and since germs do help in its elimination, by actually feeding upon it, it follows that all germs are our actual friends or benefactors in such diseases, helping and aiding

us rid the system of the effete material that it contains, and that we do, as a matter of fact, get well largely on account of, and certainly not in spite of, their presence—as it has always been taken for granted.”

(HEREWARD CARRINGTON).

If the germs help, why don't we get well every time? Because we keep on forming toxins in the body by continuing to take food. The poisons or toxins supposed to be caused by the germs and secreted by them, are formed in consequence of the medical treatment and burdening the body with food. The germs eat up the poisons and change them until they are less harmful; but when they are given more to eat than they can dispose of and the surplus poisons are reabsorbed, unreduced by the germs, the latter are blamed for the aggravation of symptoms.

“The germ theory has really exploded, and if it were not for the money that is invested in it, it would crumble into naught; but now that millions are invested, it must be kept up at all hazards. There is not one established truth, so far as the application of the germ theory to the cure of disease is concerned.

We hear a great deal about controlling diphtheria with antitoxin. Statistics have been doctored to suit the needs in bolstering up this theory, and I say that honestly compiled statistics would prove the fallacy of the theory; and time will prove the truth of my statement.

I have insisted, for years, that the only difference between the present results of treating severe forms of diphtheria with antitoxin and the treatment of diphtheria by drugs previous to the advent of antitoxin, is that the antitoxin treatment is not so fatal as the previous treatment. In other words, patients treated with antitoxin have a better opportunity to get well; nature has a better opportunity to throw off disease; and this has made a difference in the results.

But the test for the diagnosis of diphtheria is absolutely false. In examining a number of school children, the diphtheritic germs can be found in more throats that are not sore than in those who are complaining of a sore throat. If the diphtheritic germ is the cause of diphtheria, it will cause diphtheria in everyone in whose throat it finds a lodging-place. This is true, or there is not any truth about the law of specifics. The fact that germs of all kinds can be found in people who are in good health is proof sufficient to any reasonable mind that germs cannot be the cause of disease.

So long as the average person knows no difference between evidence and testimony, medical fallacy will thrive. A world of testimony need not necessarily carry one iota of evidence, and it is evidence and evidence alone, that counts; and if everyone who bears testimony in favor of the germ theory should be compelled to speak the truth, the whole truth, and nothing but the truth, there would be but little said in regard to the subject. If we had a public censor—one who would exclude everything that could not be proven—he would exclude nearly everything that is today written on the subject of the germ theory.

(DR. J. H. TILDEN).

DRUGS

Many people think if the body is out of chemical balance all they have to do to restore it is to take some drug. Nothing is farther from the truth. These substances will not be used by the body in this manner.

The people have been misinformed about the body's use of iron. It is an important element of food and the green vegetables and raw fruits are a valuable means of supplying it in the form in which it can be used. Iron that is supplied in organic form as Nature prepares it in fruits and vegetables can be used by the body if indigestion does not prevent, but it has been proved that iron furnished as a drug—that is, in inorganic form—cannot be used by the body. In the meantime it is being continually administered as a drug and the people take it, believing they are benefited thereby. The people have been taught that iron in the form of a drug could be appropriated by the system; but the medical world knows better. Having recognized the teaching as wrong it would appear that a great effort should be put forth by the profession to correct it, but such corrections are left to so-called “quacks.”

Why are drugs prescribed? Chiefly because people demand them. And why do they demand them? Chiefly because of habit, and because they have been taught that drugs cure diseases of all kinds, even such as they know have been caused by incorrect habits of living. If the medical profession now knows better, why does it not take steps to correct the error? The foundations of drug medication are weak and the drug

superstition now has but a frail hold upon the public, so fragile that it will not bear the strain of an acknowledged error. Therefore, to do so would hurt business. Then, too, it is a greater task than the profession cares to assume, and moreover a thankless one. So the work of correcting erroneous teachings is shifted to those whom they please to term "quacks," and when the efficient "quack" is well on the way to accomplish the great task, the medical profession, through its country-wide organization and by subsidizing the press, appropriates the teachings as its very own. In this deceptive way it maintains unshaken the confidence of the people—an attitude which is pitiably sickening to those who know its hollow mockery.

The commercial forces behind the drug propaganda are so solidly intrenched and the moral indignation of those who would throw a gleam of light on the drug practice has been so carefully gagged and suppressed that the emancipation now in progress will be a monument to those great men whose sacrifices for truth have accomplished it. The people are beginning to experience in health matters a profound relief, and that wider liberty that comes from thinking for themselves, while the drug forces show uneasiness and are beginning to tremble.

It is difficult for people to give up drugs entirely; they are slow to believe it can be done or that it is wise to do so. There are circumstances in which the careful use of a well chosen cathartic may be wise; there may be emergencies when the use of an opiate to relieve the dying or those in extremity is a duty; but if the treatment has been what it should have been, oc-

casions like these will be exceedingly infrequent. More disease and pain have been caused by wrong treatment than the most forceful language can describe.

“The superstition of medicine, or the belief that medicines cure disease, is a relic of what may be called a dark age, an age extending back almost a thousand years before the birth of Christ.

The superstition of medicine has filled the world with fear, and to a large extent created ills it has pretended to cure. In modern times this superstition has been more particularly appropriated and perpetuated by the manufacturers of patent medicines, whose aim is not only to keep the people in gross ignorance, but to terrify them as well. They (the physicians) know full well that the idea of the curative power of medicines is inborn, and knit into the very fiber and being of humanity, and will remain so as long as patent medicine firms continue to broadcast and brazenly trumpet forth what is the greatest myth in existence—the curative power of medicines.

With the disappearance of this myth, mankind would become at once interested in learning the means—the only means—whereby health and longevity of life are produced, that is by an observance of the laws of health.

The thousands of medicines which we now use should all, with a few exceptions, be cast into the sea of oblivion. Probably the number of medicines which are a necessity to humanity does not exceed ten in number. Most physicians, after an experience of a number of years, come to the conclusion that they must have been hypnotized, in their younger days, into the belief that medicines cure disease. In his early practice the physician is always on the lookout for a medicine which will cure disease of one kind or another. As his experience increases he comes to regard medicines as relieving conditions, not as curing diseases.

Many individuals make immense fortunes by propagating the falsehood that medicines—their medicines—cure disease. The only agent that cures disease is pure blood. Pure blood is not made with medicines of any kind, but only by pure air, pure food, and pure water.

In general, it may be said that medicines act just as so much poison when taken into the human body. Even physicians have been deluded into believing in the curative action of drugs. Medicines of a certain kind may remove the cause which produces disease, and in doing this the disease is said to be cured. Unquestionably there are medicines which are a boon to humanity, and with which we could not well dispense, but the systematic drugging of the body with the so-called blood medicines, in order to build up the body, is a weak attempt to do what Nature does to perfection by means of pure air, food, and water. Medicines are not tolerated by the system.

Barrels of pepsin and pancreatin have been administered to individuals suffering from dyspepsia. They are still suffering. As for dyspepsia, it may be remarked, in passing, that it is always entirely curable, and without drugs of any kind. We are still laboring under the delusion, perpetuated in one way or another through the public press, that medicines cure. The healing power is to be found in the blood, and not in medicines.

If man would only live, eat, and drink as he should, there would be absolutely no indication for medicine." (DR. DANIEL S. SAGER).

"There is no excuse for the use of drugs; for cures can't be made by them, and they do mask symptoms, making it difficult to tell exactly if the symptoms present are those of disease or those of drugs; and if food is being given, the symptoms will be still further modified.

When drugs are given, rest is broken; for if they have any influence at all, it is to depress and retard

recovery. A bare exception to this rule may be when the remedies used are to overcome bowel obstruction, and then a heavy head and hand prescription may do more harm than good in carrying out a plan for freeing the bowels of an accumulation that is causing disease. For example, in typhoid fever, if the bowels are forced to move, it may cause hemorrhage; in appendicitis, an attempt to move the bowels with drugs may cause death; in real obstruction, drugs given to move the bowels may cause perforation and death. There is a truth that should be known to medical men; namely, that heart tonics and stimulants wear the heart out—that patients with heart disease will live much longer, and stand a better chance of getting well, the less heart medicine they take.

Can drugs cure a bad habit? If those who have used up all their nerve energy by lust and love take pneumonia, will serum cure? Will drugs cure the stomach derangements that are brought on from exhausted nerve energy? Can drugs cure the nagger or the nagged? When men and women have exhausted their nerve energy and are suffering melancholy, can they be cured by drugs? If a woman is suffering from headaches brought on from tea, coffee, or autotoxemia, will drugs cure her? Suppose a rheumatic subject has the tipling habit, and keeps his nerve energy below par by sexual abuse—will drugs cure him?

What can drugs do? Relieve pain, of course. Yes, but drugs that relieve pain check elimination, and all the disagreeable symptoms are due to nature's efforts to throw off disease, and to paralyze the nerves with drugs means to surrender to disease.

Nothing will cure that does not look to the correction of the mental and physical bad habits. Isn't it reasonable to believe that bad habits must be corrected? Wouldn't a rational remedy be anything that will correct the habits of life?

What do drugs do for the average consultant? Relieve symptoms. If a person is free from symp-

toms for a given time afterwards, isn't he cured? Let us reason together: Suppose the symptoms prescribed for be those of a periodic headache, isn't it a fact that the nerve-storm (headache) will spend its force and be gone every little while without the aid of drugs? If drugs do anything, they merely cut the attack short. Well, isn't it worth while to get relief? Yes, if the relief does not cost too much; but if the drug is used to bring relief from two to five years, and in that time weakens heart action to such an extent that the patient suddenly dies from heart paralysis, isn't the victim paying a fearful price for a remedy that only relieves—cuts the attack short and in no wise removes the cause?"

(DR. J. H. TILDEN).

Coffee, tea, cocoa and chocolate can be grouped with a multitude of soda-fountain drinks to be condemned as drugs; for they are drugs, not foods. To be sure, they have been used for many generations, but this is no argument, for among those who have used them, thousands have died young to the one who has grown old. One is not to be preferred to another for they all introduce into the body poisons harmful to the nervous system; they cause constipation; they irritate and produce changes in the mucous membranes with which they come in contact; they do their part toward over-stimulation; they impede elimination and promote accumulation of poisons; they induce overeating. In all these and many other ways they ruin the nervous system. The more delicate the organism the more harmful their effects, therefore they are especially bad for children.

Some would not include cocoa or chocolate in the same class as coffee and tea. Cocoa and chocolate are the same in their drug qualities, the difference being

that cocoa is chocolate with some of its fat removed. Chocolate is more nutritious than coffee or tea because of its richness in fat. Theobromin is the drug it contains. Its action is the same as that of caffeine only it is milder and slower. Coffee will stimulate the nervous system in a few minutes, while the reaction of chocolate occurs much later but is equally bad.

Such influences of drugs as here enumerated bring about decay, degeneration, reduced alkalinity of the blood, weakening of the nervous system—those conditions which are the essential factors of disease. There is no such thing as a specific disease, neither are diseases inherited. The tendency toward disease of a certain nature may be inherited, but what does that mean? It means that the nervous system of the parent or parents being weakened they will naturally transmit such weakened conditions to their offspring and the weakness is very likely to be similar in nature to that of the parents. The inherited nervous system being intrinsically weak is in fit condition to succumb easily to any unfavorable environment or wrong habits of living.

This principle applies to the expectant mother who has debauched herself with afternoon tea or similar habits; it is applicable to parents who debauch or weaken themselves in any way, whether it be by coffee, tea, tobacco, society, or what not.

Coffee is a stimulant and poison. An occasional cup will not materially hurt anybody. The occasional use of coffee may sometimes be justified. The same is true of tea, cocoa and chocolate. It is not the occasional indulgence in wrong eating that kills, but the habitual violation of natural laws. Yet overindulgence

in these seemingly innocent beverages is debauching just as truly as are other more formidable bad habits; the final effect on the body is quite the same—degeneration due to poison and abuse. And moreover, the addition of sugar to any of these drinks adds to the damage done, because concentrated sweet is not good for the system.

“Nerves of special sense are made inefficient as protectors of health by the use of stimulants—tobacco, alcohol and drugs—salt, pepper, and other condiments common to sensualists. The crime committed by the use of stimulants is that the narcotic variety deadens sensations, removes the power of choice, and causes a retention of the excretory debris, while the piquant food-dressings whip into activity a false desire for food and, like the narcotic stimulants, ruin the power of discrimination.

When the nerves of special sense are abused too long, they become morbid and their cravings are abnormal; they can't sense delicate flavors, such as unseasoned foods have; tobacco, alcoholics, salt, sugar, mustard, spices, and pepper are about the only sensations craved; normal food flavors are insipid and eventually despised. When this time comes, the body has lost its defenses, and the mind has deteriorated; it cannot discriminate good from bad; the artistic mind becomes gross, and the man becomes uninteresting, and is left behind and forgotten by former friends. A tremendous price to pay for self-indulgence!” (TILDEN).

Tobacco is a drug not a whit less abominable than coffee, tea or whisky. When the saloons shall have gone there will remain another just as great evil to be destroyed—the cigarette evil. Tobacco is a poison the use of which ruins both mind and body; but so does too much bread, or pie, or strawberry shortcake.

We should have no use for the criticism that condemns tobacco and excuses coffee. We should have no sympathy with the condemnation of liquor and the excuse for overeating. We are all "tarred with the same stick." Overeating, and drinking liquor to excess, have similar effects on the physical body. The one is but little worse than the other. It may be questioned whether one who eats too much stimulating food is not more dangerous to a community than one who drinks to excess or smokes cigarettes. If you don't follow the author to these logical conclusions just begin studying this food question and observe the results of wrong habits of eating.

OSTEOPATHIC LESIONS A CAUSE FOR DISEASE

By osteopathic lesions we mean

“Any abnormality of structure which interferes with function. Do not get the idea that these lesions are great big things, that there must be a dislocated vertebra or rib, or a spinal curvature or some great abnormality in order to constitute a lesion. There are comparatively few lesions of that kind. When there is the least particle of abnormality of position of spinal structure or when there is change in the relation of bones, ligaments and muscles, these conditions constitute lesions. We may have a rotation of a vertebra and that is a lesion; we may have a curvature of the spine and that is a lesion; we may have a straight spine and that is a lesion; a rigid spine, hardened or tensed muscles all constitute lesions. They are all lesions because they are abnormal structural conditions and interfere with the origin and transmission of nerve force. When there is anything wrong with the nerve impulses, some disturbance of function is going to occur.

In order to have good digestion, good elimination, etc., we must have the proper distribution of nerve force and no interference with the nerves after they leave the central nervous system. Any of the lesions spoken of might interfere with the nutrition to the central system where the nerve cells are located. The spinal cord and brain must be nourished with good blood. The blood carries nutrition from the gastrointestinal tract to the central nervous system. If there is any interference to the blood supply on account of spinal lesions, the nervous impulses will be weak and the individual will not have good health. Most lesions come on slowly and may be two, three, four, five or even twenty years in developing. Injury and trauma

are causes; overwork, exposure and many times infectious diseases, where the individual is extremely ill for a period of time; all these are factors which will produce a warping and twisting of the spinal column and bring about mal-adjustment. Chronic diseases come on as a result of these slowly developing lesions."

(DR. G. M. LAUGHLIN).

Any of these conditions enervate, deplete and exhaust the nervous system resulting in faulty elimination and the accumulation of poisons. When osteopathic treatment is properly applied it restores a normal circulation of blood to the central nervous system, the spinal cord and brain. In doing this it builds up the system and this assists the functioning of every organ. Whatever the type of the disease, this building up of the nervous system is a great factor in its treatment. Osteopathy accomplishes this; and it can be correctly stated, that the osteopathic treatment has a wider and more general application as a curative measure than the osteopathic lesion has as a causative factor. The latter is not the cause of all diseases, but it is none the less true that osteopathic treatment will assist in the cure of a distressed condition brought about entirely by wrong eating and living. The osteopathic treatment is applicable to all diseased conditions because it favorably affects the circulation to the spinal cord and brain, and in this way maintains the integrity of the nervous system against the onslaughts of disease. The most potent active therapeutic measure that can be administered to one suffering from accumulation of poisons is this treatment; unless, indeed, the withholding of food be considered an active therapeutic measure. When the osteopath adds to the manual treatment of his clientele

the teaching of correct habits of living, he is practicing the broadest and most complete system of medicine known.

The fundamental principle upon which the osteopathic therapy is based may be stated in this way: abnormalities of body structure derange nerve impulses and the blood circulation; the adjustment of abnormal relations or conditions of the body tissues favorably affect their functioning. The treatment administered to accomplish this adjustment is manipulative in nature. Therefore, anything else is outside the realm of the fundamental principle of osteopathy though many other measures may harmonize with it.

The basic principle upon which the allopathic system of medicine is founded may be stated thus: disease is caused or maintained by chemical unbalance in the body, and drugs or chemicals are administered to favorably affect the functioning of the body tissues and organs by restoring the chemical balance. Anything beyond such administration of drugs is outside the realm of the fundamental of the allopathic school of medicine.

THE "WELL BALANCED" DIETARY

There is a false idea prevalent that a meal should be a balanced meal; that it should contain the several elements in about the same proportions in which they are found in the body. Nothing could be more absurd, and yet a majority of the people have accepted the idea without a question.

The chemical balance of each individual body differs from hour to hour and may well be described as a "changing equilibrium." In the evening it is not what it was in the morning. Today it is not what it was yesterday. It is very different in sickness and in health. It is affected by one's occupation and environment, and whether the individual is indoors or out. It varies with weight and warmth of clothing. It varies with the chest expansion; the amount of natural sleep; and many other details pertaining to the life and habits of each person.

Food tables are of value because of their general information. In general terms they mean much and should be studied more especially for information concerning those foods which offer to the body such needed mineral elements as soda, potash, phosphorus and lime, and others not usually recognized as important food elements. But to make use of food tables in an effort to balance each meal so as to meet the exact chemical requirements of the body is the forlorn expedient of a befuddled theorizer. Should a meal be so prepared it could not exactly meet the requirements of any particular one who might partake

of it, and most certainly would come very far from meeting the diverse needs of any group of persons.

Knowing the chemical needs of the body in a general way, we can place at its disposal food from which it will supply its demands. The different elements needed by the body should be supplied through foods that furnish them in a form easily used by it. Those foods containing the least number of different elements are the most suitable for this purpose, because they are the most stable, decompose and ferment less easily than complex foods, yet are more easily digested.

The body needs and makes use of many different kinds of foods, but it is not necessary to supply them all at one meal. It is not even necessary to provide all these elements every twenty-four hours. So there is no necessity for what is recognized as a balanced ration—a balanced meal.

Just how much of any food element is needed by the body at a given time is known by no one quite so well as by the individual himself, provided he is in health. General statements may be made, landmarks pointed out as guides in choosing the amount, and people may be taught to know when they have eaten enough, but determining the amount of food one should take is a personal matter. It will never be given to anyone to know how much another should eat, and the sooner this fact is grasped by the complaining, the sooner will they assume the responsibility which is of necessity theirs.

If the body is given much more than it needs of any element, serious results follow. When an excess

is taken all the food is of necessity digested in an inefficient manner. The work may be done without evident distress or disturbance, but no really sweet and wholesome food enters the blood—the tissues are fed with abnormal digestive products, or poisons. Whatever in excess of the body's need one ingests is a burden which must be unloaded at a great and profitless expenditure of nervous energy. The nervous system is very heavily drawn upon to supply the force to perform the details of digestion. And when digestion is imperfect the food given to replenish the waste is impure, and often irritating to the nervous system. The products of abnormal digestion of even the most wholesome food may irritate nerves to the extent of causing an inflammation of the nerve sheaths and a general neuritis.

CONSTIPATION

Whenever the movement of the food mass or waste material in the intestines is abnormally slow there is a constipated condition present. The rate of movement normal to one individual might be abnormal to another, so constipation is a relative term. One whose bowels move daily may nevertheless be quite badly constipated. Often in such cases the material passed any given day should have been passed one, two or three days previously. Anyone who has to "take something" to make the bowels move is building trouble very fast—is already very badly constipated.

The causes of constipation are many. There have been large volumes written on the cause and cure of constipation. Any one case may arise from one or from many causes.

If in any individual case osteopathic lesions are an important cause of constipation, then their removal is the potent measure to be employed in the cure, and until they are corrected any and all other treatment will be only palliative. The author does not believe that osteopathic lesions are the sole cause of constipation in any case. "Fix the nerve centers and eat what you please" sounds well, but is unsound teaching. It is positively wrong to teach that osteopathy can cure constipation so that the same old habits of living may be continued and the patient remain well. Someone may answer that such is being done, but that statement would be an error and could only be made by one who does not understand constipation.

Overeating, laxative drugging, and neglect or irregularity in soliciting a bowel movement are universal causes. One of the most important truths to be learned is that all laxative drugs build constipation. There is not a recognized medical authority that does not make this fact plain. Still, many who realize that drugs conduce to constipation continue to take laxatives. Why? Because physicians prescribe them, and because the people know of no more promising form of treatment. Why do physicians prescribe them if medical authorities warn against their use? Because, like their patients, they know nothing else to do; or granting that some of them do know other measures, we must conclude that they mean too much work for the medicos, for obviously they do not take the necessary time to teach that which must accompany the successful application of the better methods.

“The writer regards all medicinal agents that force bowel action by irritation (wrongly termed “stimulation”) as pernicious and, without exception, harmful, and to be used only as temporary or emergency measures.

The use of laxative drugs to cure constipation must be regarded as one of the most certain and prolific causes of this condition, and a person who has once formed the habit of using laxatives must as a rule continue the practice as long as he lives, unless he is so fortunate as to find someone wise enough to show him the way out of his troubles.

Most drugs which act upon the bowels produce their effect only after having been absorbed and circulated through the blood. This has been proved to be true even in the case of saline laxatives, which are absorbed in the upper part of the intestine, and acting through the nerve centers controlling the colon, produce a laxative effect long before the drug has reached

the colon through the intestines. The effect of many other laxative drugs may be produced by injection under the skin. It is thus evident that the action of laxative drugs is not confined to the intestine, but through absorption into the blood stream these irritating substances are brought into contact with all the tissues.

Bennett, of Edinburgh, showed more than a hundred years ago that calomel does not increase the action of the liver, and his observations have been in recent years confirmed by Rutherford and others. All laxative drugs are irritant poisons. It is not too much to say that all laxative drugs are harmful. There is no such thing as a harmless laxative medicine."

(KELLOGG).

Constipation is a full grown disorder, and is as prolific in the production of other disorders as germs are supposed to be in the reproduction of their kind. The evil effects of constipation are not in evidence at the outset of the condition. The systemic poisoning that occurs is brought about gradually and insidiously. The eliminating organs, the bowels, kidneys, lungs, skin and liver, are steadily and faithfully at work ridding the body of the accumulating poisons. They may for months and years succeed in keeping the collection below the point of violent explosion, but the victim of constipation may be quite certain that trouble as a result of it is in waiting for him. Little children thus afflicted are certainly facing a miserable life, and when parents, instead of securing compliance with nature's laws, administer soda, magnesia, etc., to these little ones, they hasten the day when the child will suffer a physical breakdown.

The evil effects of costiveness are so far-reaching and so serious that to convey any adequate idea of

them would require entirely too much space and detail. Those standing out prominently are: a change in the lymph fluid of the body by which it becomes laden with poisonous, soured or partly decomposed material; a change in the quality of the blood similar to that in the lymph and sometimes a reduction of its alkalinity; a profound irritation and weakening of the nervous system; and, not least, the direct results on the intestines, injury to the lining membrane and glands, weakening of the muscles of the intestinal wall, overdistention and prolapse.

“The fact that the bowels move daily or even more than once daily must not be regarded as evidence that no intestinal toxemia exists. If the stools are foul smelling, this fact alone is ample evidence that active poisoning is taking place. Let the skeptical reader consider for a moment what would be the result if the foul substances discharged in a bowel movement were in some way returned into the body. Suppose, even, that a person were for twenty-four hours shut up in a close room with the loathsome products of a single bowel movement. What visions of headache, nausea, loss of appetite, depression and other miseries rise at the suggestion of such a wretched experience! How much more active for evil must be the same putrefying mass when retained in the colon, and sending into the blood its flood of horrible toxins of varied sorts and potencies.” (KELLOGG).

It should be apparent that really to cure constipation means to remove all its causes. Nearly all cases of constipation can be cured in the sense that the bowels act one or more times a day,—a sufficient amount to prevent accumulation of poisons from this source. But in chronic or long standing cases there may have been damage done that never can be repaired; damage to the mucous membrane, glands,

nervous system, etc. To cure constipation is no light task, but on the contrary is one requiring the greatest skill of the physician. Whatever the measures used to effect the result, there must be a change in the habits of the patient for the remainder of life, or the treatment and the teaching will have been to no avail.

But little can be done for a patient who will not solicit a bowel movement as regularly as he takes his meals. The latter function is no more important than the former. Three bowel movements daily would be better than one. All human activities, the home, the office, the school, must be so adjusted that the impulse to unburden the bowel will not be neglected, but encouraged.

Osteopathic adjustment of anatomical lesions, abdominal massage, short fasts, light meals of fruit, sour milk, vegetables, bran, white mineral oil, drinking plenty of water and the use of the water enema are the chief additional measures to be employed. Special cases may need still other measures, of which many helpful ones are easily available.

The author's *cure* for chronic constipation is three osteopathic treatments a week and a daily diet consisting of one fruit meal, one starch meal, and one protein meal. Each treatment includes a thorough bowel massage. With the fruit meal a quantity of bran and some mineral oil is given. This routine will finally result in a daily bowel movement, and should be kept up until the spinal tissues are in at least, fair condition, then two treatments a week; later, one; and finally the treatments may be discontinued. Cases of many years' standing may be reached by these measures alone.

In the use of enemas much judgment should be employed. Harm may result from too much relaxation of all the abdominal tissues as a result of the warm enema; also from overdistention; from washing the natural secretions off the membrane; and from forming the enema habit.

To avoid overdistention always take the enema when lying down or in the "knee-chest" position, never while sitting up; and take the water slowly, cutting it off if pain or evidence of overdistention is present. The water bag should be two or three feet above the patient. Use a teaspoon of salt to the pint of water or heaping full to the quart. A pint of cool water is often quite as effective as much warm water. It brings about a very strong muscular movement or peristalsis of the bowel wall. If too cool it results in a spasm of the muscles with pain, and the cold water should not be taken. But if the bowel can be thoroughly emptied by the use of a small enema, that is better than to use a larger one. Two quarts of warm water may be used to obtain results if a smaller amount fails. If there are evidences of great relaxation afterwards, such as weakness, or aching of the bowels, or an all-gone feeling, take a little cool water into the bowel after the warm has been discharged. This cool water may be retained or ejected as desired. It will tone up the blood vessels and muscles.

In acute cases it is often well to use the enema once or twice daily for a time. In chronic cases it is a very questionable practice to use it daily for any extended period, and as a rule, it is unnecessary. The patients of the osteopath will have less need of the enema than will those of other practitioners.

Constipating Foods There are no constipating foods. That term is altogether a misnomer. Over-indulgence in any food will lead to constipation, and this is true whether the food be rhubarb, prunes, onions or what not. Too great a quantity taken at one meal may lead to frequent movements of the bowels in some people, but if the abuse be often repeated the final result will be constipation.

Some foods stimulate peristalsis of the stomach and intestines more than others and in this respect some foods may be spoken of as laxative foods; but if even these foods be ingested too often and in too large quantities the final result is sure to be constipation. Evidently in such a case the result is not because the foods are constipating, but because the continued irritation of the mucous membrane of the intestine, and the overstretching of its muscle walls bring about its enfeeblement, with consequent lessening of function.

Cheese is not constipating. The U. S. Government has proved that. (See Farmer's Bulletin, No. 487, page 15.) Cheese is a very rich food and when a little of it is added to a full meal of other food, constipation is likely to result; not because of the cheese, but because of overworking the digestive apparatus. Much more of the cheese may be taken with a reduced quantity of other food and still constipation will not result unless overeating has taken place.

Fiber that cannot be digested and certain natural chemicals in foods promote peristalsis of the stomach and intestines. The non-starchy vegetables contain the fiber and when eaten raw provide such chemicals. But raw fruits take first place among those foods supplying the chemicals.

That food, then, which furnishes neither such fiber nor such chemicals might be spoken of as more constipating than other foods; but even food of this kind excites some peristalsis and is not truly constipating. Other factors must be present to bring about that result.

Bread made from highly refined flour leaves but little fiber or cellulose after digestion, neither does it provide the necessary chemicals to promote peristalsis. Therefore such bread is, to speak accurately, less laxative than some other foods, and with it should be ingested fiber vegetables or bran. Milk, eggs, meat, potatoes, rice, and many other foods are almost wholly assimilable and leave but little residue in the intestines. These foods should not be eaten without taking at the same meal the fiber material which they lack. This is always best furnished by the use of vegetables or bran. Some vegetables contain but little fiber and others contain considerable. But those that contain little fiber furnish much vegetable juice rich in chemicals, and all furnish a moderate supply of both the cellulose and the chemicals. An ounce of green peas furnishes about nine grains of cellulose, while an ounce of dried peas furnishes twenty-eight grains. Some might think it would be wise to eat the dried peas with the bread and potatoes, or with any food that supplies little cellulose; but the dried peas furnish much nutriment of different kinds, and in themselves constitute a considerable task for the digestive apparatus, so it would be a mistake to add them to the meal consisting of potatoes, meat, bread, etc. The same is true of dried and green beans. It is the green or non-starchy vegetables listed on pages 72-3 that should be used to furnish this fibrous bulk.

MENTAL ATTITUDE

Among other bad habits a faulty mental attitude assumes an important place. No digestive apparatus can work perfectly while influenced by a mind out of tune. Jealousy, anger, fear and worry are the worst transgressions along this line. But not a few persons are sorely distressed by lesser ones. The causes of these mental troubles must be discovered and removed. The following paragraphs sensibly discuss some common mental attitudes:

“It is impossible to correct digestive troubles so long as an individual lives in an atmosphere of discontent; all that can be done is to palliate by selecting foods and food combinations that offer the least tax to the digestive functions. When these people are persuaded to believe that food has nothing to do with their bad feelings, and they recklessly eat anything and everything they certainly become very miserable.

Almost daily I am told, by someone, of the many articles of food that disagree with him and then he adds that at times these foods agree. The reason for this is that the mind is better poised at one time than at another and there is more nerve energy than usual. Whatever the general opinion, I know that these patients can be made comparatively comfortable when taught to suit their eating to their moods.” (TILDEN).

“Fear is the most destructive emotion of the mind; it paralyzes, kills, and destroys. Fear and worry are synonymous terms. If we do not worry we do not fear, and if we do not fear we do not become angry. Worry, fear, and anger are the grossest forms of egotism—self-imaginativeness. Fear is due to superstition and ignorance. Fearlessness must be cultivated by every individual. Fear is the one demoralizing agent. It lets down the bars and opens the system to the inroads of disease, inviting the very evil that we dread. It shuts

off any healing action in proportion as we are held under by its paralyzing and depressing influences. Opposed to this is faith, which gives assurance, confidence, and trusting expectancy; it is the one restoring and sustaining mental state. Faith is the antidote to fear. Faith restores and exalts as much as fear demoralizes and depresses.

If it were possible for me to teach humanity how not to worry, I feel that I could have accomplished no work more far-reaching and beneficial in its results. Just as overeating is probably the greatest sin that is committed against the physical body, so in like manner is worry the greatest sin committed against the mind or mental body.

Worry, or the worrying habit can be cured; undoubtedly so, but only by a systematic method of training of both body and mind. Worry is a habit of the mind, which is as susceptible to training, subjection, and control as is any other individual function of the body.

Worry is a most useless employment. Certainly one should not worry over what can be helped or prevented. If it can be prevented, all that remains to be done is for the individual to do it, and the trouble is ended. If it cannot be prevented, only harm comes from thinking about it.

The individual must be his own physician. He must realize, with every fiber of his being, the utter, absolute uselessness of the sin of worry. He must understand that if it were possible for him to spend a thousand years in thinking it out, in worry, it would not change the facts, causes, or conditions, one jot or iota. One must fully realize and be impressed with all this in his inmost consciousness before recovery is likely to come. When the point is reached, the point where every worrier perceives the absolute senselessness and futility of worrying, the cure of worry will have begun.

Fear is not the only emotion that can do us deadly harm. Grief is one of the best known and most gen-

erally recognized of these killing emotions. A fit of anger will destroy appetite, check indigestion, and unsettle the nerves for hours, even days. It will be observed that excitement may become a vice, and become harmful in its effects when carried to excess. Jealousy will upset the entire system, and is one of the most deadly enemies to health, happiness, and success.

These bodily effects of the emotions, and many others, are in part due to certain chemical products formed in the body by the emotions, and are analogous in their effects to the venom of poisonous snakes, which is likewise secreted under the influence of fear and anger. A snake has a receptacle or sac in which to store the venom; man has nothing of this kind, so that the venom spreads through all the tissues in spite of efforts to eliminate it.

The emotions of sadness, pain, and grief affect the bodily secretions and excretions. It can be shown in many ways that the elimination of waste products is retarded by sad and painful emotions; not only this, but that the depressing emotions directly augment the amount of these poisons. On the other hand, the pleasurable and happy emotions, during the time they are active, inhibit the poisonous effects of the depressing moods, and cause the bodily cells to create and store up vital energy and nutritive tissue products. By proper training, the depressing emotions can be practically eliminated from life, and the good emotions rendered permanently dominant. We must live in the happy memory of what was once enjoyed, rather than with useless regrets.

Self-pity is one of the greatest afflictions that can happen to any individual. It begins by a surrender of one's pluck and moral courage in combating the battles of life. It is the giving up of hope, the loss of which is dangerous. Without hope life would not be worth living. In becoming the victim of self-pity we invite disease, mental disease, and its resultant condition of 'chronic invalidism.' We become cowards in our own estimation." (SAGER).

APPETITE

When anyone loses his appetite there is much solicitude on his own part as well as that of his friends and his physician. Everything else is put aside and a general welcome given to any counsel, no matter what its source, that will point a trail by which something may be learned of the missing appetite. It is difficult for people to believe that Nature would say, "Don't eat." This is because of wrong instruction regarding the necessity and use of food, and the cause of disease. That person, patient or physician, is not prudent who will not listen to the wisest of healers—Mother Nature. When Nature points the direction, man's knowledge, experience and wisdom should be relegated to the background.

Out of the noble impulses of the human soul arises the desire to show sympathy, to be of comfort and use to those who are ill or unfortunate. This commendable virtue leads members of a family, relatives and neighbors to hasten to give the sick some favorite dish. Every artifice of the good cook will be used to induce the ailing one to take food. That friend who insists that the sick partake of the dish so thoughtfully prepared constitutes a hindrance difficult to overcome. These attentive people could do no greater unkindness than to induce one seriously ill to eat. That sick child is unfortunate whose parent becomes unduly concerned at his loss of appetite, and at all hours of the day and night persuades the child to take nourishment. Not that the parent or friend has in any way lost sympathy or tenderness; but the best of intentions from the noblest of hearts unless guided by wisdom often carry one astray.

He who does not desire food is in no condition to receive it. Such a one would escape more serious illness by heeding Nature's advice. Many an insane person would become better if his food were properly prescribed and administered. Many a fever would disappear if it were not fed. If there is no appetite, take no measure to force one as there is something else that should be righted. Go back farther for the cause; and until that is found and removed, it is quite safe to let food alone.

"Appetite is discrimination; it must have stimulation; it is disease. Appetite must have just the right amount of condiments on the food, or the food cannot be eaten. It is an artificial desire for food, and is the same, except in less degree as the inebriate's desire for alcohol, and the fiend's desire for opium, morphine, cocaine, and other drugs." (TILDEN).

"A voracious appetite is a sign of disease, or of a strong tendency to disease, and not a sign of health, as is generally supposed. Ill health as infallibly follows the indulgence of such an appetite as any other effect its legitimate cause." (DIO LEWIS).

There is a vast difference between a keen relish for food and the diseased condition of a demanding or driving appetite usually spoken of as "hunger" or "good appetite." "I am so hungry!" "I always have a good appetite," are expressions generally thought to refer to healthful conditions, but in truth, they usually mean disease. If it is necessary to tease and coax the palate with condiments and sweet dressings and excessive mixing, there is present a diseased condition, of which the abnormal appetite is a sure indication. If plain food cannot be eaten with a keen relish no food at all should be taken. Food is not *demanded* by a natural appetite, but by disease.

BUT LITTLE FOOD NECESSARY

How is it that on a given amount of food a man can do more work than a machine? How is it that a man can continue indefinitely to do daily an enormous amount of work with pick and shovel while subsisting on a ration whose energy equivalent would scarcely start an engine? How is it that the Japanese jinrikisha man and the Chinese coolie can perform so much physical labor while living upon a small amount of rice, and little else? It is evident in such cases that not all the power manifested comes from the food eaten.

Again, how is it that fasting, if not continued to the point of starvation, often results in increased strength? How is it that frequently persons living for weeks on a diet of sour milk and fruit become stronger during that time? Why is it that Nature shuts off the desire for food from the seriously sick? To such, great strength and resisting power are highly valuable for recovery. If food imparts strength, would it not seem strange for Nature to cut off this source of help at a time when help was most needed? The truth is that Nature has not failed us in so doing, for food taken at such a time decreases the body's strength.

Office of Food *The chief use of food is to supply material with which to build and repair the body. The great sympathetic nervous system is the architect that plans, superintends and directs the processes of digestion and assimilation, or body building. The various digestive organs are the masons,*

carpenters and builders, working according to plan and specification. The food is the lumber, brick and mortar. Present information does not justify one in saying that this is the only office of food in the body's economy, but it can be truthfully said to be its chief purpose.

Whence, then, comes the power, the energy, manifested in and through us? It is God. It is Life, innate within us. It is a filled reservoir supplied when life was given us. This reservoir, like a storage battery system, can be recharged when depleted, and such recharging is the *chief* function of natural sleep. An abundant supply of oxygen facilitates this process, which goes on not only during sleep but also to some extent while one is at rest even during waking hours.

The reader may recall that faint, lank and hollow feeling due to missing an accustomed meal, and how this feeling of weakness has rapidly given place to strength when food next entered the stomach, "pep" and vigor having returned at once, even before leaving the table. Was not the food still in the stomach, or had it indeed been so quickly changed and become a part of the body? We all know, of course, that it would probably require hours for such a change to take place. Then how explain that immediate response? The power to reassert the consciousness of physical vigor was already present, and required only the stimulus due to the *presence* of food in the stomach to call it forth. The food, by its presence, required the central nervous system to rally the forces of life to do the work of digestion, and the dynamo turned on the power for that purpose, and this power reached not only the stomach but all the tissues of the body in

sufficient amount to cause the feeling of exhilaration and renewed strength. The tragedy in such a case is that the power reservoir is depleted to the extent of the demand made upon it. It should be kept in mind, however, that if the system be in condition to digest the food properly the loss will be justly compensated in the subsequent repairing and rebuilding of tissue.

Overeating. The greatest of all dietetic errors is that of taking too much food. If one will but strictly avoid overeating it will not be necessary for him to give much attention to his menu. The matter of food combinations plays but a minor part in the welfare of the individual who does not so offend. Why? Because the body will compensate for many abuses, and for all of them, so far as may be possible. Many who read these sentences will hereby at once absolve themselves from the necessity of giving any attention to their eating, and permit themselves all kinds of indulgences. It is in line with the desires of such to convince themselves that their eating habits are not at fault, but the wise will discover the truth.

Most persons who are feeling "out of sorts" are overeating; the exceptions are so rare as to be negligible. It is not unusual for members of a family to accompany one of their number into a physician's office and give assurance that the ailing one is the lightest eater of the family, notwithstanding that careful inquiry brings out the fact that the quantity of food taken has been far in excess of the need.

What is meant by overeating? With what standard am I to compare my individual practice in order to determine whether or not I am thus transgressing? Although a relative matter it cannot be determined by

comparison with the action or habit of another. It depends upon many things and is wholly individual. *Eating beyond the digestive capacity, or beyond the real need of the body constitutes overeating.*

"We are all guilty of it (overeating) not occasionally but habitually, and almost uniformly, from the cradle to the grave. It is the bane alike of our infancy and youth, our maturity and age. It is infinitely more common than intemperance in drinking, and the aggregate of the mischief it does is greater. Children and youth are regularly taught, hired, bribed, or tempted, to overeat from their birth. Our stomachs are the scape-goats which must bear all our physiological delinquencies and save us the pain of blaming ourselves. If they feel uneasy after a heavy meal, it is not we who are to blame for having eaten it. No, it is the fish which lies heavy on the stomach, or the stomach which is unfortunately at war with soup or potatoes, or some other well-relished article. We never eat more than enough. We never devour lobsters or oysters or salmon or cheese, or anything which experience has told us our enfeebled stomachs cannot digest. We are too prudent and self-denying for that. And yet, somehow or another, our stomachs get hold of all these things in spite of us, and we must pay the same penalty as if we had eaten them deliberately and with malice prepense." (DIO LEWIS).

The person who overeats may not suffer immediate harm, but is sure to suffer eventually if the practice is continued. If the harmful effects of overeating followed immediately upon the act it would soon become a forgotten vice. One who has been upon a reduced diet will naturally, upon increasing his intake of food, experience a stimulation, a sense of betterment, provided he does not at once overtax the digestive apparatus by an indiscretion. But this seeming increase of vitality, this sense of well-being will

continue only so long as the nervous system can easily bear the strain of handling the added food.

Regardless of what the food may be, whether fruit or coarse vegetables or both—or anything else under the sun—if the digestive apparatus is overworked, indigestion and constipation, with undue distention of the bowel by feces and gas will follow, and the intestinal walls will become weakened. A fruit meal may result in indigestion and flatulence even in a perfectly healthy person, if the digestive capacity has been exceeded. Nothing is gained by overindulgence in food, but on the contrary if the quantity taken is kept within the limits of the actual body needs and the capacity to digest, there will be a minimum of gas, constipation and putrefaction, and that most desirable result will follow, namely, the “toning up” of the muscles in the intestinal walls, with resulting recovery from any prolapsed or overdilated condition of the intestines. This latter fact seems to be entirely overlooked by those who advocate large quantities of food as a means of increasing the activity of the colon. It should require no unusual wisdom to understand that there is a limit to the amount of work that may be accomplished by the digestive apparatus, and that hence the more logical procedure would be to *give rest to the bowel muscle by reducing the quantity of food.*

If one overeats, even of buttermilk and fruit, trouble will just as surely follow as though the occasion of the offense were a heavy meal of baked beans and veal stew. It will be different, of course; the same bacteria will not be present, but others will. Why others? Because the number and kinds present are determined by the physical condition of the person

and the character and amount of his food. The bacteria useful when putrefaction of flesh, for instance, is taking place in the colon are less useful when there is undue fermentation of fruit and buttermilk, and hence in those conditions other forms will predominate. Some authors writing upon this subject have much to say of the countless millions of germs in the colon, and in particular of the virulence of the poison of those attending the putrefaction of meat; but let me emphasize that the number is largely a matter of the general wholesomeness and efficiency of the digestive tract, and that such as are present will not be poisonous unless the putrefaction of the food residues upon which they subsist renders them so. Don't try to get rid of the germs, but get rid of the conditions which demand their presence.

The products of fermentation of carbohydrates are acids which, if present in excessive quantity, are very irritating to the nerves, and often cause inflammation beneath the nerve sheath. They lower the vitality of the entire nervous system; they irritate and enfeeble the cells of the mucous membrane with which they come into contact, and they derange the secretions of the glands in the stomach and intestinal walls. A limited amount of fermentation normally takes place during the digestion of carbohydrates and its acid products are harmless. It should be clearly understood that overindulgence in food, with its train of indigestion, constipation, dilatation of the bowel and excessive fermentation may result in a degree of acidity very injurious in its effects.

To merely say to a patient, "Don't overeat," would be as foolish as to say, "Don't worry." In order to

overcome this frailty certain fundamental principles governing nutrition must be understood and complied with. The meals should not be taken where there is stress and forced speed in the service, the hustle and bustle of waiters, the clink and clatter of dishes. It is difficult to remain composed and to chew the food deliberately under such circumstances. Loud, quick, and restless music acts as a stimulus to rapid eating, while music that is calm and sweet may be consistent with deliberate eating. Enough time must be allowed for the proper performance of this important function, for hurried eating invariably leads to overindulgence. The rich starchy foods and the rich proteins should not be habitually ingested at the same meal, if for no other reason than to avoid repletion. Rich dressings, sweetened dressings, gravies, condiments, jellies, fruit preserves, and highly seasoned food of any kind will overtempt the palate, and their continued use will inevitably create an "artificial appetite" which will supersede the promptings of natural hunger. Sipping a liquid while eating a dry food is a deceptive procedure easily leading to overindulgence. Any food taken when fatigued, worried, excited, angry, or overjoyed will bring on the same effects as overeating, since in these conditions the digestive processes are inactive. Modern cooking, in which all the resources of the chef or housewife seem to be used to devise dishes in which a large assortment of foods are combined, leads to the same bad result.

Daily habits must be carefully scrutinized and many of them changed in order to avoid this dietary error. If the linen is spotless, if the food is simply prepared, tastefully arranged and daintily served, if

the conversation is cheerful and uplifting, the chances for good digestion are very much enhanced. As far as possible, comply with this advice: eat at home, and only when there is a keen inclination and taste for plain food, prepared and served in the simplest manner.

Of course people cannot always eat at home, but it is usually possible to choose a home-like place in which to eat. When demanded by the public, quiet will accompany the down-town eating place. One should demand foods that are plainly cooked and not over-seasoned. And in passing it should be observed that when eating away from home it is often necessary, in order to obtain a meal of suitable combinations, to eat two or more servings of some one article of food and wholly to reject others. Thus when meat is desired, refuse the potato or starchy preparations that go with it, often at the same price. When a sufficient number of people follow this course, meat will be served alone and at less cost than when other articles are served with it. The managers of public eating places should be told how displeasing it is to have non-starchy vegetables cooked and served with so much grease. Most people prefer these cooked in plain water, seasoned with salt only, with cream added when served hot. Lettuce and celery should be offered in quantity, not merely as a relish. Fruit should be supplied in larger or smaller quantities according to one's desire, and this fruit should not always be preserved, or served in syrup. It is difficult to obtain at an eating house a baked apple or prunes not ruined with sweetening. This is because managers of these places assume that people eat fruit as a dessert only. When they learn

that patrons desire that green vegetables plainly cooked, and fruit, either raw or simply cooked, shall constitute a large part of a meal, they will supply what is wanted. The cure of overeating must come about by removing the cause, whatever it may be. The will power must be cultivated and persistently used.

NATURE OF DISEASE

If disease is not a thing caused by germs, if it is not a thing to be combated by drugs, if it is not a *thing* at all, what is its nature? As darkness is best defined as the absence of light, so disease is best defined as the absence of health. It is not an entity or thing which attacks. It is built. It is grown. The seed is sown, the soil cultivated, and the product is the general condition of ill-health. This is true of tumors, eczema, appendicitis, and the rest of the long list.

“People seem to think that disease is a sort of rat running about within the body, and that we must send in a black-and-tan to kill it. You will hear them say: ‘My trouble was in my stomach; the doctor gave me some stuff and drove it into my kidneys. Then he gave me another sort and drove it into my head. Now he is going to attack it there.’ ” (DIO LEWIS).

Excess and overindulgence are the great factors in the building of diseased conditions. Only a few ailments are brought about by privation and destitution. Overeating, overworking, worry, fear, jealousy, anger, pessimistic ideas, hatred, fretfulness, selfishness, disappointment, too much warm clothing, too much society, too much responsibility, mental and physical sex abuse, too much tea, chocolate, cocoa, coffee, tobacco, and other drugs, etc., all these and many more have an important place as causative factors in disease though too often ignored as such. They are of such vast importance that often the existence of one or more will defeat every effort to help; but its removal and the application of proper treatment will re-

sult in immediate relief and ultimate cure. These debilitating habits and human frailties do not look like faults to some people, even to some physicians, but are accepted as an inevitable part of the mysterious game of life. Such is not the truth and only the blunted conscience will accept it as such.

Poisoning is the proper term to be applied to most diseases. Autointoxication and toxemia are common terms, and if understood are very good ones. But it should be borne in mind that self-poisoning results from body abuse and not from poison secreted by the body cells. There is little difference between pneumonia and typhoid fever, between measles and eczema, between constipation and diarrhea, between a general neuritis and epilepsy, between appendicitis and enteritis, between rheumatism and tonsilitis; not so much difference as the names imply. Do all of these result from the accumulation of poison in the system? Yes, but it is brought about in various ways, and different tissues are involved.

If all such diseases are so similar, why so many different names? Because disease is considered an entity, a thing; something that can attack, or that can be driven out. If there is a pain in the temple it is called neuralgia, but few persons recognize it as part of a general toxic condition of the entire body. If the patient does not sleep, then it is a nervous trouble, and neither patient nor physician sees that it is a disturbance of the sympathetic nervous system—a general condition.

“I dare not tell you how important I think it is that you should fully take in this idea—that the general is everything, the local nothing. Never till

you comprehend this can you even make a fair start in these health investigations." (DIO LEWIS).

Thus are diseases named from the symptoms, and the symptom is considered the disease, and is so treated. The symptom is a timely and friendly warning, and it is wrong to ignore Nature's danger signal. The effort should be to correct that which causes the pain, the fever, the discharge, etc. If we go back to the sources of these disease manifestations, they will be found to be local signals pointing to a general condition, which is an accumulation of poisons, or chronic toxemia.

Sore throat, enlarged tonsils, adenoids, sick headache, neuralgia of the face, pain in the eyes, pain or aching of the cheek, enlarged turbinates, nasal polypi, decaying teeth, pyorrhea, earache, etc., may all be caused by a congestion in the head resulting from stomach and digestive disturbances. There may be other factors such as osteopathic lesions of the neck, jaw, etc., but they are seldom the only cause.

The tenth cranial or pneumogastric nerve may be much irritated by fermentation and decomposition of food in the stomach, and through its connections with other nerves of the neck and face there may be under such conditions a tightening of all the muscles at the base of the head, thus blocking the blood drainage to the heart and producing congestion of all the cranial structures, both deep and superficial. And besides these direct results from irritation to the nervous system, there are irritating gases gradually oozing up the esophagus which irritate the mucous membrane of the throat and adjacent tissues. This leads to a

congestion of blood in the membrane and glands and partly accounts for enlarged tonsils and adenoids.

Deceptive Nature of Certain Disturbances The general public is pitifully ignorant about diseased conditions of the stomach and intestines. These organs may be violently disturbed without giving the patient distress. One may have a bad catarrhal condition of the stomach and intestines and continually believe there is nothing wrong with them. Ulcerated conditions of these organs may be present and the patient not complain in the least. A badly constipated condition may be building a violent disease and no pain be connected with it at all. Carrington says:

"I have long contended that even very grave states and diseased conditions might exist without giving the least hint of their presence by any external noticeable sign."

He further quotes the following from Dr. James Gulley:

"The most serious ulceration of the stomach and bowels—nay, cancerous ulceration of the stomach and bowels—may go on without the smallest amount of animal pain."

Dr. Dio Lewis quotes the following from Prof. Hitchcock:

"But men do not perceive the bad effects of over-feeding, because in general they are ignorant of their character, and confine their attention to the more immediate effects instead of looking at those which are remote. They generally suppose that, if the stomach or any internal organ be oppressed or disordered, pain will be produced in the organ itself; whereas, the uneasiness and pain are most commonly in some other part, not infrequently a remote part, of the body.

And, oftentimes, food which ultimately does the man a great deal of injury gives to the stomach a transient relief, just as piling a large quantity of wood upon a fire seems for a time almost to extinguish it."

The X-Ray is rapidly convincing physicians and dentists that very serious diseases of various organs and of the teeth may be present without accompanying pain. And it seems to be an unfortunate circumstance that pain does not accompany these disturbances. This fact alone explains thousands of perplexing conditions. It explains how a child or an adult while in seeming health may suddenly become the victim of a fatal disease. The whole world of "scientific medicine" is grappling with the puzzle, to find the germ and whence it came, and is overlooking things more important. Parents think because an infant or child is fat and puffy it is in perfect health, but they will not believe its sleeplessness, its nervousness, its peevishness, its irritability could be caused by overeating, or wrong eating. So people must learn that wrong diet and wrong living do not always without warning strike a blow in the face to set the violator right, but that nevertheless for every cause there is a corresponding effect, and that every overindulgence will sooner or later enforce its penalty upon us.

These diseases do not occur without any premonition, but we have yet to learn that any indisposition or discomfort is a very, very loud and important warning. We have not yet learned that everything revealed by Nature is highly important. We refuse to listen to Nature, but instead pay somebody who probably does not understand her messages to guide us, it may be, blindly. It is most difficult to convince people who have no pain or distress that their diges-

tion may be at fault. It is not surprising that experienced doctors shrink from the thankless task. We often lose a patient by merely intimating that the trouble is in the bowels or stomach, or is due to some habit of eating, though similar to that practiced by the multitudes; for how can that which everybody does be wrong?

Indigestion, involving a slightly soured condition of the food mass or a little decomposition of it will result in the absorption of much poisonous matter. This is the result of more food than the digestive juices can properly reduce. Such digestive disturbances build tremendously serious diseases. They result in severe disorders of the colon which is a matter of grave concern—the principal cause of infantile paralysis, epilepsy, the more violent forms of rheumatism, and other such maladies. They are as insidious, deceptive, sly, illusive, and at the same time as deadly, as a copper-head snake. Pain is absent in these cases because the sympathetic nervous system is chiefly involved.

Each and every cause is followed by a suitable and well measured effect, and let me assert with strong emphasis there is no exception to the rule. Abuse of the digestive apparatus does not kill immediately; and this fact offers the only explanation of the continuance of the outrageous maltreatment of the stomach now almost universal. Abuse of the digestive system even for a short time brings a protest, but neither physician nor laymen is trained to interpret the milder warnings of Nature. Nothing but violent sickness or distress is regarded, and this is especially the case when there is a suspicion that food is the cause.

Food is ruled out by reasoning that it cannot be harmful to anybody. The little pain in or about the eye, the soreness and distress at the base of the brain, the pain in the side or in the limbs, the flutter of the heart, the slightest tendency to nausea, a bad odor of the breath, the metallic taste, the sliminess of the mouth secretions, the soreness of the mouth, throat, tonsils, or nose, the constipation, the foul odor of the stools, the inactive liver, the cold hands and feet, the red nose, the lack of appetite, the tendency to catch cold, the desire for large quantities of food, the desire to eat between meals, and countless other fitting and adequate warnings are dismissed with a wave of the hand, "I must have caught a little cold," or with a dose of medicine and "patient waiting" until something more serious results. It is reasoned that since everybody eats this way it cannot be harmful. But this is the reason why everybody is ill, and why there are so many physicians, pretenders, and quacks who are making a living "curing" the sick. It is true that no ideas whatsoever about food will adequately explain all illness, for sickness is not brought about by a single cause but by many causes. Experience and observation leads the author to believe that the food question in all its phases is so large a factor in the causation of disease as to make many other elements dwindle to pitiable insignificance. Each and every discomfort of the body, every departure from a feeling of well-being should be intelligently interpreted, and arrested in its incipency rather than allowed to mature.

There is no known disease that cannot be caused by excesses coupled with climatic conditions. Excesses of all kinds are factors in their building. There is no

disease that will not be less severe if food is kept from the body during illness except in the quantity that can be properly digested and assimilated. There are many common complaints which will entirely disappear if the quantity of food ingested is limited to the quantity actually needed.

The future study of disease should be concentrated upon an investigation of the effects of bad habits of living. It should be a study of the accumulation of poisons within the body, their causes and effects.

It is time people learned to recognize some of the cardinal signs of disease. They are too willing to believe that such discomforts as they may experience are wholly independent of food. It is repulsive to many people to be told by a physician that they are eating too much. People want to be cured while they continue to indulge the pet weakness that has caused all the trouble; if you will work to that end, you may be their choice among doctors; but if not, they will choose another.

PART TWO

PART TWO

FOODS AND THEIR COMBINATIONS

A complete discussion of many of the subjects already mentioned would require a book in itself. It has been the object in this work to make statements tending to open up new channels of thought and to incite further study.

The emphasis placed on diet would be faulty if it led one to believe that foods cured any disease. They are without value as curative agents. The withholding or the proper prescribing of food may be very helpful. There is no one diet that can be claimed to be superior to all others. No one has a corner on any diet, or any dietetic idea. Many different theories regarding food possess merit. To separate the chaff from the wheat in these ideas is the thing needed.

In considering foods the usual classification is ignored and they are discussed under the general heads of rich starch foods, rich protein foods, non-starchy vegetables, fruits, fats, sweets and miscellaneous foods. This point of view is not wholly original with the author for similar terms are to be found in the writings of Dr. J. H. Tilden; and the food combinations given herein are largely the result of experiments conducted along lines suggested in his books.

Rich Starch Foods That the term may not be bunglesome this class of foods is spoken of as starchy foods. Irish potatoes, sweet potatoes, rice, tapioca, Hubbard squash and the various grains including the products made from them, such as all kinds of breads, cakes, crackers, doughnuts, the different flaked cereals, oatmeal mush, cornmeal mush, shredded wheat biscuit, macaroni, hominy, corn-starch products, comprise the list that are most frequently found on the table. In these, starch is found in its mature or granular form which is more difficult of digestion than starch in the milk form. *Milk starch* is at that stage of development in which the capsule of the starch granule is not firm and completely formed; *granular starch* is matured starch having a matured cell-wall or capsule.

Rich Protein Foods The protein in the body is derived from many different foods, but those in which it occurs in decided strength are all kinds of meat or flesh, eggs, milk, cheese, all kinds of nuts. When sweet corn, string beans, Lima beans and green peas become a "little old" they should be classed with the protein foods. It should not be overlooked that protein is found in small quantities in many articles of diet. It occurs in an appreciable amount in some of the non-starchy vegetables. It is well to think of eggs, cheese, and nuts as though they were meat, and to combine them accordingly.

Non-Starchy Vegetables These are the green, succulent, or juicy kinds, and might well be termed the fiber vegetables. Those of this class in common use are turnips, carrots, cabbage, cauliflower,

Brussels sprouts, edible-pod-peas, beets, onions, summer squash, parsnips, cucumbers, celery, asparagus, mushrooms, egg-plant, lettuce, salsify, endive, spinach, dandelion and all other greens. Very new and tender Lima beans, green peas, sweet corn and string beans should be included in the above list. All these so-called non-starchy vegetables contain starch, but it is milk starch and is more easily digested in this than in the mature form.

Discussion of Starch Food

Use Less Starch "Most people have from one to six kinds of starches on their table three times a day." (TILDEN). Can anyone state a good reason why we must have some one or more of these starches at every meal? Is it any more necessary to take a rich starchy food at every meal than it is to eat a rich protein food, like meat, at every meal?

The never failing presence of one or more of the rich starchy foods on the table may be easily accounted for. The starches are all palatable. They are easily prepared. No other class of food can be so easily stored away for quick use without fear of decomposition. As a class they are the cheapest food on the markets. They can be mixed in a palatable way with nearly every other known article of diet, and writers on dietetics and home economics have worked the public up to a high-pressure temptation to mix, mix, mix, until mixing has become a consuming fever. Furthermore, physicians almost universally give their approval to the custom; certainly there are few of them found decrying it. So the habit is established, and

“nothing in life is stronger than habit, nothing harder to overcome.” (SAGER).

When given an opportunity, the saliva starts the digestion of starch. If conditions in the stomach are favorable its further digestion continues there, but the greater part of starch digestion is accomplished in the intestines. Those suffering with intestinal trouble should know therefore that this class of food is not the most suitable for them. Starch is best used largely by itself. And the same statement may be made regarding any other class of foods. Any plain food taken by itself will call forth a ready response from the digestive tract to meet the requirements for its digestion. It is a good rule to eat very few different articles of food at any one meal. It is best to use only one of the rich starchy foods at a meal, otherwise overeating of starch easily results. This may seem like turning civilization backward, but by adhering to this rule the sick will be better prepared to go forward.

The amount of digestion effected by the saliva will be determined by the thoroughness of the chewing and the time the food remains in the mouth. The usual habit of eating is so rapid that the salivary digestion is almost negligible. While all foods should be well chewed, this is particularly important when partaking of starchy viands. They should be chewed and insalivated until very fluid, and should never be taken at a meal which must be eaten hastily.

These facts plainly show how greatly we wrong our bodies by eating milk toast, liquid oatmeal mush, milk on cereal flakes, crackers in soup, and by taking anything of a liquid or juicy nature like fruit, celery or any vegetable into the mouth at the same time with

starch, or by eating sweets at the same time with it, like sugar on oatmeal, etc. If cream is taken on oatmeal it should be so used as not to interfere with the chewing. If milk is to form a part of the starch meal it should be sipped when the mouth is empty of other food.

**Harmonious
Combinations with
Starchy Foods**

In the early history of the human race life was comparatively simple and complex food combinations were almost unknown. Now life itself is complex, its many and various demands depleting the nervous system and often unfitting it for the work of digestion, while the average dietary has become an indiscriminate hodgepodge. The knowledge of the proper combination of foods plays a vital part in the return of the sick to health. It cannot be given a place second to any therapeutic procedure unless it be osteopathic manipulation which results in improved circulation to affected organs and to the brain and spinal cord.

“To starch’s credit it must be said that its great offending is due more to the company it is forced to keep than to its own influence.” (TILDEN). The general character of the secretions of the mouth is alkaline. The general character of the secretions of the stomach is acid. Starch is best digested in an alkaline medium, and when it alone is taken into the mouth and chewed thoroughly the digestive process is well begun there, and the resulting product passed into the stomach is not likely to ferment. When it reaches the stomach it will meet with a digestive fluid much less acid in nature than if protein had been included in the meal. We have good reasons to believe that for a time

at least the character of the stomach secretions will be alkaline, when starches alone are present. When starchy food passes to the intestines it again encounters alkaline secretions which are especially adapted to its digestion.

Certain other foods may combine well with starch, but usually should not be taken into the mouth at the same time. The rich starchy foods combine nicely with raw or cooked non-starchy vegetables. This combination affords a large variety of dishes. The rich starchy foods combine suitably with butter, bacon, honey, sweet milk, cottage cheese and cream cheese. Some people may add buttermilk to this list, but as the results of this combination is not uniform only a favorable test will justify its use. It should be apparent that the combinations of honey and starch, cheese and starch, have their limitations. Milk contains both carbohydrates and protein, but is not very rich in either, and the favorable results following its use with starch vindicates its use in this manner.

Incompatible Combinations with Starchy Foods	Starch is best digested in an alkaline medium, and this being true it follows that mixing starch with foods that are acid or that require an acid medium for digestion is a dietetic error. The acid of fruit by neutralizing the alkalinity of the digestive secretions retards the digestion of starch, produces undue fermentation, and forms violent poisons which escape into the blood and are carried throughout the body. Cooked starch ferments most easily of all foods, and in fermenting "sours." Every housewife knows the nature of soured flour paste and soured bread-sponge. When cooked
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starch is mixed in the heated stomach with fruit acids the resulting excessive fermentation leads to an excess of acids in the stomach and intestines and through their absorption to an excess in all the fluids of the body including the lymph—a state of affairs known as acidosis. This condition leads to inflammation or irritation of the nerve sheaths, and those nerves will first be affected which are deprived of full nutrition because of an osteopathic lesion. Herein is largely the cause of rheumatic fever, chronic rheumatism, local and general neuritis.

The statement that starchy foods are not to be combined with acids must be taken at its full value, though people are not prepared to believe the physician can mean it seriously or that it should be actually applied in practice. Such combinations as strawberries and cake, bread and jelly, orange or other acid fruit to begin the breakfast, followed by oatmeal or cakes, they think are permissible exceptions, and that because everybody does these things they must be right. But these very bad habits are making people sickly; they are building adenoids, bad tonsils, ear disturbances, headaches, and a thousand other ills.

The race has been committing this error for a long time—some men of science even recommending this combination. Physicians, nurses, hospitals, all make use of such mixtures. But it should be noted that a majority of the race are ill, and that the battle with disease is not a new thing. It is plain that the bad results of this wrong combination are not manifest immediately, for even the sick may not always be further stricken immediately after it is eaten. The robust may with apparent immunity do violence to

the digestive system the greater part of their lives; but this seeming exception does not change the immutable laws of Nature. If such a combination be indulged in only occasionally, no serious effects may be noticed; but if used habitually, bad results are certain to follow. Conversely, the consequences of correcting this dietetic error should be observed very closely. They will bear investigation. *The results of combining foods properly yet remain to be perceived by the average physician, by scientific investigators, and by people generally.*

To break off this custom abruptly works a hardship at first. There is no harmful combination more generally used or more difficult to avoid. It is sometimes months before one can complete with a sense of satisfaction a meal at which no bread has been eaten. Many who condemn others for failure to give up tobacco or liquor will wince at foregoing the combination of starch and acid even after becoming convinced that its use is injurious. But the physician knowing the facts, has no choice in the matter; he must forbid indulgence in this combination even though its occasional use may not be a serious matter. To make up meals without including both acids and starches will require studious attention until the custom is established, but thereafter it will require no more care than preparing meals in the usual way. Persons who will persist in combining fruit and starch should keep in mind that starch will combine better with raw than with stewed fruit, because raw fruit acids are the more stable in character. Cooking fruits tends to destroy chemicals that assist in digestion and the body is called upon to supply the deficiency and enough more

to accomplish the work of digestion. Raw apples, berries, and raisins are the fruits that will combine with starchy foods in the least harmful way. Raisins in bread or various other starchy preparations have proved to be wholesome, and reasonably compatible in combination. However, people who are ailing cannot safely use questionable or doubtful combinations.

The final product of the digestion of starch is sugar, therefore it would seem that sugar would combine well with starch. The secretions excited by sugar are not favorable to the ready digestion of starch, and when these are taken into the mouth at the same time, the secretions excited by the sugar interfere with the proper mastication of the starch. Concentrated sweets, as sugar and candy, are irritants to the mucous membrane very much as salt is. Honey in limited amounts may be used with starch. It is different from sugar in that it does not require digestive juices to prepare it for assimilation, therefore they are not so likely to be called forth, and fermentation is not promoted, but may even be restrained by it.

The author finds it is better to sweeten starch with raisins than with a more concentrated sweet. Malted milk also may be used for the same purpose.

Starch does not combine well with a rich protein food. For when protein is taken into the mouth the secretions stimulated by its presence are less alkaline in character than those excited by starch. They are probably neutral, and no digestion of protein takes place in the mouth. The more protein is chewed, the more nearly neutral will the secretions be. If chewed only a little they may remain alkaline and have an influence toward the decomposition of the protein, espe-

cially if it be meat. If masticated thoroughly there is a chance of the saliva becoming neutral or acid in nature. When protein is passed into the stomach its secretions become decidedly acid, this being the condition necessary for the digestion of proteids, and in turn the secretions thrown into the intestines and formed by them in the presence of protein are specially suited for its digestion.

Now is it not clear that if a bite of rich starchy food like bread or potato is taken into the stomach together with a bite of meat or any rich protein food, the digestive tract is required to accomplish simultaneously two processes requiring conditions diametrically opposed? It is thought that the digestive fluids attack each particle or molecule of food separately and not the whole mass as an entirety, but even if this be true, the results under the circumstances stated will fall hopelessly short of the perfect completion of the digestive process.

Either of these classes of food calls for heavy work on the part of the digestive apparatus and nervous system. Partaking of both at one meal necessitates overwork resulting in depletion of the body's nervous energy and some degree of indigestion. The combination leads to overeating when otherwise this might not occur. The taste and the palate are more likely to say "You have enough" at a proper time, when but one of these classes of food is taken than when they are combined. This is not merely the statement of a theory but the record of observation.

To be sure starch and protein are combined by Nature in some articles of diet, like mature beans and peas. But there are no foods more easily taken to

excess than these rich ones in which starch and protein are combined naturally. The mere fact that this combination is made by Nature—chiefly in the form of seeds—does not alter the truth that people will surely have digestive disturbances if they habitually eat the rich starchy foods and the rich protein foods together. And because this is true special attention should be given to the other foods taken at the same meal with such combined foods, or at other meals taken on the same day in which they have been eaten.

Prepared Cereal Foods The numerous cereal flakes, puffed grains, shredded wheat biscuit, grapenuts, and the various kinds of food on this order are partly digested starchy foods. Some are less concentrated than others, but most of them are more so than the same weight of ordinary bread or potato. They are not to be condemned, but understood. They will be digested in less time than starches not similarly prepared and therefore are more stimulating. Their sweet taste is evidence of partial digestion, and this very condition leads to their being eaten rapidly and in larger quantity than the system needs. It is easy to overeat of these foods, and herein is their real danger. Grapenuts seems to be especially concentrated and stimulating. Shredded wheat biscuits are a good food for those who like them dry. If to foods of this nature the usual amount of other rich starchy fare be added the total is almost certain to be an excess. All prepared cereals should be regarded as rich starchy foods.

If the nature of the numerous kinds of rich starchy foods is understood, it will be seen that any one of them will meet the needs of the body for this

kind of food, and that within limits one may be substituted for another without fear of injury to the health, though often the use of one is more appropriate than another. If those that are poor in mineral elements be used exclusively for any extent of time, the needed mineral elements should be supplied with non-starchy vegetables and fruits. If one is fond of whole-wheat bread there is no reason why he should substitute shredded wheat biscuit for it. If a child chooses cereal flakes eaten dry instead of bread or potato, there is no good reason why its wishes should not be gratified. In truth there is a very good reason why they should be granted. If there is no fundamental difference in two starches, that one should always be chosen which gives the more enjoyment and satisfaction. But there is a decided difference between taking cereal flakes soaked with milk, and toasted bread eaten dry, or the cereal flakes eaten dry.

Prevent	Starchy foods are very prone to fer-
Excessive	ment. For this reason those with
Fermentation	weak digestive powers should be care-
	ful that these are eaten only at such

times as the stomach is prepared to receive food; they should give special attention to the mastication of starch, and should use only the most suitable of the starchy foods and the proper combinations with them.

Yeast contributes very much to the readiness with which starch ferments; so that while foods of the starch class in general ferment the most easily, yeast bread heads the list in this respect. It is the most treacherous of foods, and nothing can be more expensive than an inferior quality of baker's bread made with yeast. Yeast bread should be banished absolutely

from both table and cook book. Though the custom which now seems to demand its use is indeed solidly intrenched, independent thinking and observation will bring an illumination which will work the change.

People should provide the best and most wholesome bread possible. Especially should all those who have in charge the feeding of children consider the vital importance of furnishing them with faultless bread. The finest and most wholesome bread is that made with soda and sour milk in either biscuit or loaf, but bread made with baking powder is quite satisfactory.

Since toasting renders it less likely to ferment during digestion, those lacking in digestive power should take their bread in this form, toasting it in a slow oven "through and through" to a light straw color. Fresh bread hot is no worse than cold; and the only advantage offered by stale bread is the necessity of chewing it more thoroughly.

Cooking of Starch The digestibility of starch is increased by cooking, but no method should be used which leaves the starchy mass in liquid form. Cooked starch foods should be so firm or dry that chewing will be required. Oatmeal porridge, rice, or other foods of this nature, should be so cooked as to be firm when served, and may be eaten with uncooked raisins, honey, butter, or cream, but without sugar. The addition of cream, if used, should be so managed as not to hasten the swallowing, or lessen the mastication.

Potatoes, when used, should take the place of the usual bread. They should be baked, or they may be pared, boiled until done, then browned in the oven.

Mashed potatoes permit but little chewing and encourage over-eating, so their habitual use should be discouraged. When gravy is added to mashed potatoes the resulting mixture is quite objectionable. The habitual use of such food by children proves a curse to them, sapping their vitality and undermining their good health. Mashed potatoes, served with a little butter, and chewed thoroughly with some other morsel of food that promotes thorough mastication, like dry toast, may be used occasionally without disturbing the health. Fried potatoes cannot be too severely condemned and this applies with particular emphasis to those that are fried before being otherwise cooked.

Bananas For dietetic purposes the author classifies the banana as a starch food. It is seventy-five per cent water and twenty-two per cent carbohydrate or starch. It contains considerable oil, some protein, and is almost free of acid. Classing it as a starch and not as a fruit provides for its proper combination with other foods. It may be used as a part of a starch meal. Three to five thoroughly ripe bananas make a good meal without other food.

Bananas should be eaten only when they are very ripe. The unripe raw banana has somewhat the consistency of clay. When mashed in the mouth the particles do not separate, and in the stomach they also remain intact and are apt to start decomposition. This characteristic unfits it for food. Green bananas contain a little less than one per cent sugar and twenty-two per cent starch. Ripe bananas contain seventeen per cent sugar and seven per cent starch. Overripe bananas contain nineteen per cent sugar and less than one per cent starch. The transformation of the starch

into sugar during the ripening process enhances their value as a food. Even then their digestibility is improved by baking. To bake bananas cleanse them thoroughly and place in a moderate oven in their natural covering for twenty or thirty minutes. If the oven is not too hot the covering will not break and the oil, delicate odor and taste are preserved. After cooling, remove them from the covering and eat with cream or toast.

Discussion of Sweets

Sugar Sugar is a good food but is commonly so used as to result in much serious disaster to health. Sugar is a protein saver; by which is meant that the more sugar one uses the less protein he needs, within certain limits. The sugar found in fruit and honey is the form best for the body. Raisins, figs, dates and prunes contain much fruit sugar; this is rich in that sweet known as levulose, and which is assimilated by the body without further digestion or change. Honey contains much levulose, hence its value as food. It is the only concentrated sweet that can wisely be used, and even that must be used sparingly.

Ordinary sugar—by which is meant cane, beet and maple sugar—must undergo a chemical reaction before it becomes levulose, the only form in which the body can use it. This transformation takes place chiefly in the small intestine, not in the stomach. As is well known, watery solutions of sugar ferment very easily. Whether eaten as candy, syrup, in cakes, cookies, doughnuts, fruit preserves, as seasoning or sweetening for any food, sugar reaches the stomach ready to ferment and usually does it. Sugar is not a

natural food, hence has no place in a rational dietary. Even small amounts of it should be banished entirely from the diet of the invalid.

When it is understood that the final products of starch digestion are sugars, and also that these form a large part of the final products of the digestion of fruit, it can be readily seen that there is enough of that material furnished the body in the average diet with no addition in the concentrated form of sugar. It should be clearly understood that every bite of potato, or of bread, or of any wheat product, or of any other form of starch adds a little more sugar to the system, and it will then be realized that very much of the money spent for cane sugar is spent for the implanting of disease.

"The fact that the starch of cereals is, in the process of digestion converted into sugar, has led many persons to suppose that by eating of cane-sugar, the task of the digestive organs is lightened; in other words, they assume that cane-sugar, being a predigested form of starch, will be more easily assimilated and is better adapted to the system than starch itself. This is an error, the facts being the very opposite. The teaching of Physiology on this point indicates that cane-sugar in the stomach is in the wrong place. Cane-sugar in any form, as in maple syrup, candies, bon-bons, preserves, etc., is specially prone to ferment within the stomach." (SAGER).

The quotation following is taken from an editorial in "Gleanings in Bee Culture".

Cane and Beet Sugars "Cane and beet sugars lead all the others in amount in the diet of Americans.

Refined sugar is about as dead a food as one can well imagine. That it has food value we

would not deny, and it has the advantage that when it can be digested, it gives up its energy quickly, this being the only purpose it serves. The process of refining removes from sugar all mineral matter and all of the partially evolved sugar. That the human machine needs mineral salts is well known, and that we can digest the gums and similar matter found in raw sugar is equally recognized. However these are all removed, and in refined sugar we get simply the stimulant sugar—quick results in energy but no lasting good. Probably the refiners are to blame for the fact that we use so much refined sugar and so little of the types that give permanent good, but the fact that sugar production can be carried on only on a large scale leads to such processes.

Glucose The craving for sweets has led to the making of a product of still less value, glucose. Good corn is used for this purpose. Glucose contains a large amount of gums, which even though we can digest them, result in a food which has little sweetening value. Glucose is in reality a food which has been partially converted into a substance which can be assimilated without further digestion. So far as it has been prepared for human assimilation it is a good food, but it lacks the very quality desired in a sweet—sweetness.

Sorghum In the south-central and southern states considerable quantities of sweet sorghum are grown, and this source of sugar has greatly increased since the war began. In classing sorghum syrup with the less desirable sugars we do so, not because it is in any way injurious, but because it

is usually an inferior product. The process of manufacture is crude, the product is so variable as to make its purchase a gamble; and furthermore it is subject to the same criticisms as cane and beet sugars in that they are sucrose, an uninverted sugar which places a tax on the human stomach. However its use will probably decrease again after the war is over. The appetite for this is, in a sense, a cultivated one, and certainly sorghum syrup cannot be called a first class article of diet.

Alcohol and Sugar Mention was made in the beginning of this editorial of the fact that the use of sugar increases as the use of alcohol decreases. This is true all over the world. Every people seems to demand some sort of food from which they can get a quick response in energy, and the speed with which the American people live probably calls for an unusual amount of food of this type. We have learned that in using alcohol for this purpose we are getting results other than those of quick energy, for it leaves a trail behind. However, to increase the use of sugar as rapidly as we have done is placing a strain on American digestion that we cannot stand without evil results of far reaching importance. The products that have been discussed are not of the type which do us good, but there are sugars which have better qualities and are of better value for human consumption.

Fruit Sugars In the United States there are probably five million acres planted to apple trees, more than the acreage of all other fruits combined. Add to these enormous figures the crops of peaches, plums, pears, cherries, berries, and citrus fruits, and it will

be seen that the American people do get great quantities of natural sugars, in such form that they may be digested and assimilated readily. In addition to fruit sugars these foods furnish nourishment of other types, including the highly important fruit acids. The amount of fruit sugar produced and used in the United States cannot even be estimated, but there are great quantities of sugar in the one hundred million dollars' worth of apples which the United States produces in the average year. Some of the fruits contain so much sugar that it is useless to add any cane or beet sugar in preserving them. For example, when prunes were unusually cheap a few years ago in California, it was seriously proposed to manufacture sugar from them. Grapes are made into raisins without the addition of sugar. There is also a great amount of sugar in the date and the fig, both of which are being raised in the United States in increasing quantity.

Maple Sugar The maple sugar industry was formerly an important one in parts of the country. The amount of maple sugar produced is small, yet it is about half that of the honey production of the country. Maple sugar is sucrose like cane and beet sugars. It, however, has the advantage that it contains mineral salts and other products, making it a more natural sweet than its more popular rivals.

Honey Honey surpasses all of these sweets. It is a predigested sweet, putting no tax at all on the digestion of those who eat it. It gives up its energy as quickly as any other form of sugar, and at the same time it furnishes a small amount of protein, considerable mineral salts and, above all, it contains vitamins, the products found in some foods in minute quantities

which further the processes of growth. What more could we desire in a food? It is an energy food, and is not taken primarily for its body-building properties. Yet it puts no unnatural strain on the digestion, it has a flavor we all know surpasses that of any other sweet. It has properties which make it desirable for use in baking, and it does have some body-building value. We ought all to be missionaries of health and to do all we can to reduce the sugar debauch of the American people."

Discussion of Protein

Use Less Protein The usual daily protein consumption is much greater than the needs of the body demand. Experience with the sick convinces the author that whatever amount is taken beyond the body's need is a positive injury. The surplus does not add to the resources of the body, but is carried as a burden and gives origin to poisonous materials, which destroy the body's chemical equilibrium. Only our intelligence, our experience, and a knowledge of foods will enable us to know how much we should take. Each person must learn to gauge for himself the amount he needs. And with good judgment, a little information concerning foods, and a wise interpretation of experience, he can do this more accurately than any one else—even a physician—could do it for him.

"The advocates of a high proteid intake believe that it is well to take more than is necessary—more than the system requires for building and repair—so as to have a reserve on hand in case a sickness should come requiring a reserve. The truth is, if there is a reserve, a time will come when it will have to be got rid of—sickness will come because of it, not from lack of it." (TILDEN).

Flesh Food Protein All flesh used as food should be regarded as in the rich protein class. The red meat of pork and beef is much richer in protein than the white meat of fish or fowl. From this fact it would seem that the white meat would be much easier to digest than the red, but experience does not prove this to be true. A portion of fish or of the white meat of chicken faultlessly cooked is no more easily digested than the same amount of pork equally well prepared, yet more nutriment is gained from the pork.

Eggs, nuts, cheese and milk are protein foods that may replace flesh in the diet without injury to the health. One or two *eggs* furnish enough protein food for one day, and, while one may not suffer at once if he eats more, such indulgence should not be habitual. *Nuts* are very rich in protein. They often result in digestive disturbances because indulged in too freely or because they have not been thoroughly chewed. It is difficult to avoid swallowing small particles of the nut meat not completely mashed. These bits of unchewed nut will tenaciously resist the action of the digestive fluids and give rise to heartburn or other symptoms of indigestion. *Cheese* is so rich in protein that its use even in small quantities as an addition to a full meal of other food is quite unwise. And, in any case, only a small amount is needed or can be digested perfectly with any one meal. *Cottage cheese*, being less concentrated, may be used more liberally and is a very wholesome food.

Meat Not Harmful People have been taught that it is extremely harmful to eat much meat, but they have not learned that it is but little less harmful to overeat of eggs, baked beans, cheese or

nuts. They have been made to believe they are "on a diet" when they eat no meat. "It is a physician's business to understand all foods as much as possible, not as a faddist, nor as a fanatic, but as a rational being able to render the greatest good to the greatest number." (TILDEN).

Meat, and especially pork, is a strong food, and very stimulating because it is digested quickly and its substance soon passed on to the nerve cells. It requires a large supply of oxygen for its assimilation. Those having large breathing capacity or working out of doors can partake of more than others and still maintain health. Like other foods, meat is more easily digested if thoroughly chewed; but if the fiber is fairly well broken it may be eaten rapidly with less serious results than would follow the swallowing of starch without thorough mastication. Protein foods that have a less fibrous structure may be eaten more rapidly than meat, peas or beans. An egg may be eaten for a hasty lunch, but bread or rich starchy foods, never.

The one great objection to meat as a food is its tendency to putrefy. This is dangerous. If one's alimentary tract does not handle meat well he had better not partake of it. But the author finds that when taken in proper combination with other foods it can be digested by many who have serious experiences with it when taken in the usual manner.

Cold meats, canned meats, dried or cured meats, and improperly fried meats, should be regarded with suspicion. Home-cooked meats may safely be used when cold because of the certain knowledge of their condition, and canned fish is being used freely by many without harm.

Harmonious Combinations with Protein Many disagreeable experiences and even diseased conditions arise from faulty preparation of and overindulgence in meat, and from improperly combining it with other foods. Meat being best digested in an acid medium, it has been found helpful to use it in combination with tart foods. The acid fruits either raw or cooked are suitable. The tomato, a vegetable fruit, is especially adapted for use with meat or other protein. All kinds of berries, cherries, peaches, apples, apricots, plums, etc., may be served as a part of the protein meal, either as a dessert, or as part of a fruit, or fruit and vegetable salad. Cranberries, tomatoes, or lemons, are often served directly with meat.

All of the non-starchy vegetables combine well with protein, and those suitable to be eaten raw may be taken in that condition. In addition to the protein dish one may use cooked non-starchy vegetables, raw vegetables plain or in the form of a salad, and fruit. Careful attention should be given to the salads accompanying a protein meal when such are used. Details of salad combinations are given on page 102.

If meat is suitably prepared, properly eaten in reasonable quantity, and in combinations as given above there will be no difficulty in its digestion, if one is in condition to receive such food. The tendency of raw vegetables and raw fruits to prevent fermentation, the greater activity of the different chemical elements in raw juices, and the greater ease with which meat is digested in the presence of acid, render the above combinations favorable to the perfect digestion of the whole meal. If meat is taken in this manner, its moderate use will prove satisfactory and helpful.

**Incompatible
Combinations
with Protein**

Starch is not to be taken at the protein meal, and this caution is more emphatic if the protein is meat. It is so generally the custom to eat bread or potatoes with every meal that anything less than a positive direction to the contrary is always misunderstood to include bread and potatoes. The author believes, however, that the greatest harm from this combination results from the overeating which it easily favors. When the amount of starch and protein is small and combined in the least objectionable way—that is, with cooked and raw non-starchy vegetables, and fruit no more acid than apple—no harmful results seem to follow, for digestion may be perfect.

The food most incompatible with protein, and especially with flesh foods, is sugar. Whoever thinks of adding sugar to meat or eggs as a dressing? The very idea is repulsive. And yet we have custards, also various preparations of protein with starch in which sugar is an important part. To be sure, one can take a small amount of sugar or honey with the fruit or other food when the taste demands it, even when taken at a meat meal, but not without some degree of injury. The pernicious results of the combination may be tested by eating a meat meal with abundant sugar. Digestion will be delayed and decomposition is likely to take place before the meat leaves the stomach. The rancid grease, the decomposing meat, the fermenting sugar, all hot and nauseating, impose upon the nervous system a great task. People who habitually use such combinations will suffer seriously with glandular trouble, tonsilitis and headaches. When people have become accustomed to attribute distress or sickness to

faulty food combinations they will doubtless discern that this particular combination is entirely wrong.

It is not advisable to partake of more than one rich protein food at a meal. Overeating of protein results in "biliousness," which means an overworked liver. It is the custom with many to use milk frequently as part of a meal. Milk is less rich than most protein foods, but it is unwise to use it with a meat meal. Likewise it is easy to overeat of milk and eggs when taken at the same meal. Only the robust can so indulge with any degree of safety.

Cooking of Protein At no time during the process of cooking should protein be overheated. Two hundred degrees Fahrenheit is about as high a temperature as it will stand without becoming toughened, and one hundred and fifty degrees is a safer limit. Even that temperature may injure milk if too long applied. The boiling of milk toughens the casein and injures it as a food. When milk is used in the preparation of a cooked dish, it is best to add the milk after the cooking has been done. If the food is not sufficiently hot for the addition of cold milk, warm the milk, but do not overheat it. The non-starchy vegetables, when served with cream, should first be thoroughly cooked and the cream or milk added when done. A custard should be made with just enough heat. Time is the important factor in cooking such a dish; use little heat and sufficient time.

Eggs should never be heated to the boiling point of water. If baked, the oven should not be over two hundred degrees. Eggs may be cooked hard at this temperature if enough time is taken. But whether cooked hard or soft they will be tender. Too much

heat toughens the protein element, renders it difficult to digest, and makes it less valuable as a food. When eggs are cooked slowly in pure and wholesome fat they are less damaged by frying than most other foods.

The protein in tender meat is often made tough by too great heat; but very tough and old meat may be rendered tender by long cooking with a slow fire. For this purpose just enough water to prevent burning should be used, with a little salt. The vessel should be covered and only very light boiling or simmering of the water permitted. Several hours may be required to make it sufficiently tender to fall to pieces easily as it should be. There is no better way to cook meat. *Broiling* is an excellent method of preparing meat, but lack of skill too often forfeits success in the process. When meat is broiled the outside is sacrificed and toughened for the sake of retaining the fine flavor. *Frying* meat is only a modification of broiling, and when the governing principles are well applied, it is not so harmful a method as is often thought. The fat used should be fresh and above suspicion in every way and not some that has repeatedly been heated. The least amount sufficient should be used. The heat at first should be great, then reduced a little but not too much. More heat is necessary for broiling and frying than for cooking meat in other ways. It is the tendency of American cooks to hasten their work too much. Many housewives believe meat to be done when about half cooked and still tough.

Milk Milk is a questionable food for some people.

There is no doubt that some adults will digest it more perfectly and with more ease than others. This

must be determined by each one for himself. Milk is not good for very sick people. The good results gained by its use in sickness are due to its being less burdensome than some other diets frequently used. Milk alone is better than milk toast, or toast and meat broth, or toast and eggs, or many other complex diets commonly prescribed for the sick.

It is a prevailing idea that the ill must take food to maintain their strength. Most physicians believe this to be true, and reasoning that milk is the simplest food that will supply all the elements of the body, they naturally prescribe it a great deal in illness. But its very complexity, the very fact that it does contain so many different elements makes it of less value in sickness than a food with fewer ingredients, and in fact unfits it for the sick. Milk should be avoided by those of a bilious temperament; and by bilious temperament is meant that of one with such an accumulation of poisons that the liver is frequently overcome. Those who have trouble in digesting milk will find that they digest it more readily if fruit acids are taken with it.

Malted Milk Malted milk may well be used in the diet of the indisposed. Whether its merits arise from ease of assimilation, as claimed by manufacturers, or from the fact that it does not overtax the digestive system with nutritious material, as thought by the author, is a matter of no great importance. It is more tasteful when hot than is cow's milk, and warm food being more acceptable to the weakened stomach than cold, this is an advantage not to be ignored. Some find it acceptable in powdered or liquid form as sweetening for tart fruit.

Ice Cream Home-made ice cream is not only a pleasing food, but a valuable one. The starch, gelatine, and similar substances used in the commercial product are not always thoroughly wholesome, and in any case detract from its dietetic value. Ice-cold food or drinks are always objectionable. Anything cold taken into the stomach during or soon after a meal will delay digestion and bring on disturbances. Hence, ice cream should always be permitted to melt in the mouth before being swallowed, and people with weak digestive powers should be especially cautious in partaking of it.

Discussion of Non-Starchy Vegetables

Eat More Non-starchy Vegetables The non-starchy vegetables should have a very important place in any dietary. In addition to a quantity of the purest water obtainable, they supply natural chemicals or tissue salts absolutely necessary to the body economy, in a form obtained from no other source. These play no little part in the chemical reactions taking place in digestion and assimilation. Certain of these chemicals are called vitamins. As isolated substances studied as drugs these chemicals including vitamins are of no importance, but research and experiment have proved them as provided by nature, to be indispensable to health. The main reason that these tissue salts in natural foods are valuable to us while chemical equivalents out of bottles are not, is that after extracting them from the soil, the plant has combined them organically in its own substance, and these organic compounds are the only form in which our bodies can make use of them.

The chemicals of the non-starchy vegetables and fruits assist in maintaining the chemical balance of

the body, promote intestinal peristalsis, increase the alkalinity of the blood, and thereby insure against disease. These vegetables also provide bulk which plays a small part in regular and efficient bowel action.

The non-starchy vegetables should form a large part of every starch and protein meal. Among other great advantages of their use will be the lessened tendency to overeat. The taste for them should be cultivated. It is usually impaired as the result of overseasoning. Because the flavoring of the seasoning is expected, and when instead, the natural savor of the vegetable becomes appreciable, it is so unusual and surprising that displeasure is at once manifested. The taste may be trained to delight in the delicate natural flavors more than in those artificially created.

Some of these vegetables may be eaten raw, and it is best to take them that way, for cooking detracts from their value, rendering the juices less stable and less active. The juices of raw vegetables like those of raw fruits are helpful in preventing undue fermentation. Cooking probably destroys the vitamins and brings about chemical changes unfavorable to perfect digestion. The author believes some of the chemicals of raw vegetables and raw fruits are helpful to their own digestion and also to that of other foods. Unchewed raw vegetables are very difficult to digest. Thorough mastication *must* take place or trouble follows. The tough fiber should be chewed free or else decomposition and fermentation will ensue. Not a few people find vegetables do not agree with them. If these same persons chew the fibrous material free from all other matter they are less likely to have trouble, but if after doing this they still experience difficulty in assimilating

ing vegetables, they should reject the fibrous material. If more cellulose material is needed, bran may be used.

Harmonious Combinations with Non-starchy Vegetables Reference to the paragraphs relating to combinations with rich starchy and rich protein foods will show that non-starchy vegetables combine well with both of them. Those that may be eaten raw can be taken with uncooked fruits to form a meal. Parsnips, Lima beans, or peas, because of their richness, may be used with other non-starchy vegetables to constitute a meal. The vegetable soup may be used by itself as a meal.

Incompatible Combinations Except as given above, cooked non-starchy vegetables by themselves do not make a satisfactory meal. For instance, such a combination as stewed onions, stewed turnips, green beans and spinach taken alone as a meal is likely to remain undigested in the stomach a long time and may cause much trouble. Experience shows that cooked non-starchy vegetables do not combine satisfactorily with either raw or cooked fruit, if taken with the fruit alone. Meals of this kind are almost void of stimulating substances, and the author believes this accounts for the incompatibility; but this in no way conflicts with the successful use of cooked non-starchy vegetables and fruits with a more stimulating food, such as a rich protein.

Cucumbers Fresh, crisp cucumbers never hurt those who are in fit condition to receive food. A lady recently reported to the author that she ate them last evening and suffered terribly as a result; that she

never ate cucumbers in her life without suffering afterwards. Her meal that evening consisted of bread, butter, potatoes with meat gravy, strawberries, raw cabbage and cucumbers with vinegar over them. She did not eat meat for fear it might harm her! Now this woman should have said she suffered from eating bread, butter, potatoes, gravy, strawberries, cabbage, cucumbers and vinegar, all at one meal. There is no consistency in picking out any one article and blaming it. Had she eaten the meat with the cabbage, cucumbers, strawberries, and lemon juice, she would not have suffered unless she was not in condition to receive any food. Had she eaten the bread, butter, potatoes, cucumbers and cabbage, there would have been no distress. "These same stupid people will eat meat, bread, potatoes, gravy, pie, and sliced cucumber in vinegar, and wash it down with a pint or quart of buttermilk; then when cholera morbus shuts them up like a jack-knife, declare that the cucumber has the devil in it."
(TILDEN).

Radishes The radish is a valuable article of diet, though many people have trouble digesting it. It is possible for these people to eat half a dozen or even more at one meal and not have bad results if only every particle is chewed to a fine pulp. Radishes grown rapidly and served fresh and crisp are the best. Pithy ones are not to be eaten.

Cabbage Cabbage is one of the best non-starchy vegetables. It should not be cooked in grease as is often done, but as directed below. When eaten raw its digestibility will depend upon its thorough mastication and, there being no more difficult

vegetable to chew, this is often done imperfectly and indigestion follows. *Sauerkraut* may occasionally be used as a part of a meat meal and some people may use it frequently.

Onions Raw onions are a good food if masticated thoroughly, but are productive of much harm if not chewed to a liquid form. Particles of onion entering the stomach in solid form quickly decompose. If the raw onion is too hot to chew comfortably, it should not be eaten until baked or stewed. If it burns the mouth so it cannot be well masticated, it is not fit to eat but should be cooked however young and fresh it may be.

Salads 1. Lettuce, celery, and onion chopped together and seasoned with lemon juice and salt, or lemon juice only.

2. Lettuce, celery, cucumbers and fresh tomatoes chopped together and seasoned as in No. 1.

3. During the fruit season fresh berries or grapes may be added to either of the above; fresh apples or oranges may be sliced and added. In the winter California grapes or canned tomatoes may be used.

4. Raw cabbage may be used as a salad substitute, or a small amount of it may be added to any of the above dishes.

5. Apples and jello.

6. Apples, radishes, cucumbers chopped together and combined with jello.

7. The raw vegetables without acid dressing may be used with a rich starchy meal.

A dressing of lemon juice and sweet milk may be used on any salad that is part of a protein meal. A dressing of nut butter and pineapple juice is well adapted to any salad, and is an excellent dressing for lettuce. Make the nut butter liquid by adding hot water, and when slightly cooled add the pineapple juice. Butter made of several kinds of nuts is choice for this purpose. A mild mayonnaise dressing, or various fruit juices, or any fruit juice with milk, may be used as a dressing. Use lemon juice instead of vinegar.

It is often healthful to eat a very large serving plate of one of these at a meal, as much as half of a large head of lettuce, or an entire small one, if lettuce alone is taken, or about that quantity of the combined salad.

How to Cook Non-starchy Vegetables A good plan is to put them into a covered vessel with just enough salt water to prevent burning, and permit them to cook slowly some time even after they become very tender. Some may be thus cooked for several hours. Add only salt when cooking. Cream or butter may be added when served. If some are to be left for a later meal the cream or milk should not be added until ready for serving, as they keep better without milk. A flour thickening is not to be advised, though its occasional use may be permitted; toasted bread crumbs are better for this purpose.

The taste of some vegetables is improved by cooking them with others. "Turnips and carrots, turnips and parsnips, onions and spinach, cabbage and endive,

are a few vegetables that may be cooked together to advantage." (TILDEN). The taste of carrots is improved by cooking with peas or beets. The latter require a much longer time to cook than carrots, and these may be added when the beets are half done. When a person dislikes any vegetable it can usually be cooked with another so as to make the taste agreeable.

Vegetable Soup

(Modified from Tilden)

Take equal parts of four or five of the following vegetables: potatoes, turnips, carrots, cabbage, celery, spinach, onions, green peas, green beans, sweet corn, beets. The potatoes may be "left-overs." Grind all these vegetables fine and put to cook with enough water to prevent burning, and when tender, add boiling water or hot milk to make soup. Sickly people should use water instead of milk. Season with salt and butter, or salt and cream. Tomatoes may be used when the soup is to accompany a meat meal, provided the potatoes be left out.

Vegetable Soup should be eaten without the addition of starch, though for some this may mean a great sacrifice. Crackers or toast may be eaten dry between sips of soup, but to put them into the soup is a poor way to eat starch. If there must be something more than the vegetable pulp to chew, add chopped raw cabbage, which will afford something to chew while the soup is being sipped, and will be more consistent with health. When the energy usually expended in devising obnoxious combinations is turned to seeking suitable ways in which to prepare dishes of plain food tastily, civilization will be better served.

Discussion of Fruit

Use More Fruit Fruit supplies to the body very important elements which promote intestinal peristalsis and assist in preventing fermentation and decomposition, and in maintaining the chemical equilibrium of the body. Some of the fruits are commonly considered laxative, but not everything that stimulates movement of stomach and intestines should be looked upon as a laxative. Fruits taken as a meal without other food tax the digestive apparatus very little, thus giving the organs a rest, and in constipation and all digestive disturbances rest is a therapeutic measure of the greatest value.

All kinds of fresh acid fruits (which includes the tomato and excludes the banana) are cooling to the blood and should be used freely in the summer season, less freely during the mild winter weather, and not at all during the very cold weather. The mucous membrane lining the stomach and intestines of some people seems so delicate and sensitive as to become unduly irritated by very acid fruit if taken often. Grapefruit, lemons, cranberries, some plums, rhubarb, strawberries and cherries are fruits in this class. They should be used by these people within the limitations dictated by experience.

If a tart berry is crushed in the mouth it will taste very sour. If crushed before it enters the mouth it will taste less sour; and if the juices of the crushed fruit is first diluted a little with cream or milk the sour taste will nearly all disappear. These facts may be applied to avoid the harmful use of sugar when eating a tart fruit of any kind.

Dates, figs, raisins, prunes—all sweet fruits—are especially suitable for use in cold weather, though they may be used at any time.

Physicians very often inform their patients that the acid of fruit will cause sour stomach, or bring on rheumatism or make it worse. It is common for them to seriously caution those afflicted with neuritis not to make use of sour fruit juices. Such warnings have been passed along until there is a widespread impression that fruit juices are harmful in many conditions, especially in rheumatism and neuritis. This conception is incorrect. Why is it that people afflicted with rheumatism or neuritis do not get rid of these troubles when they stop eating fruit? Why is it that some of those who don't eat fruit nevertheless develop these troubles? It is daily being proved that fruit is one of the best foods for people afflicted with rheumatism or neuritis. There is no reader of this book suffering from either disease but can prove it for himself, unless, perchance, his condition be such that he cannot eat fruit until his system has had an opportunity to rid itself of accumulated acids. If such a person will restrict himself to a vegetable diet for a short time, or, better still, fast for a few days, he may then eat fruit fearlessly if he will but use it in proper combinations.

Raw Fruit The carbohydrate of green fruit changes
Best to sugar as the fruit matures, thus the ripening of fruit contributes to its nutritional value and ease of digestion. As far as possible fruit should be eaten raw. Most fruits when ripe and fresh are more delicious raw than cooked, hence the use of raw fruit is one healthful measure that is largely followed. Any cooking of fruits should be simply done,

without the addition of starchy ingredients or of much sugar. Fruit preserves, jellies, jams, and marmalades are "palate teasers." They are harmful in character, and their use leads to overeating, usually overindulgence in starchy foods. When taken, such preparations should be eaten as part of a fruit meal, being best used as sweetening for the fruit.

Harmonious Combinations with Fruit Fruit combines well with all the dairy products in whatever form taken, whether as sweet milk (whole or skimmed), sour, or sweet cream, buttermilk, clabber, cottage or cream cheese. Raw fruits may be used with raw non-starchy vegetables; sour fruits with rich protein foods.

The combination of milk with fruit is nearly always called in question, but it is a healthful one and is not so likely to make one sick as is generally supposed. The first step in the digestion of milk is the curdling of it by the stomach secretions. The acid of fruit is helpful in this curdling process and tends to prevent the bilious condition so often following the free use of milk. Milk that before being eaten has been curdled by the addition of fruit juice is every whit as wholesome as natural milk taken at a meal wherein acid is used, for in the stomach the acid will mix with the milk and the mass will curdle much more quickly and firmly in the hot stomach than out of it. The accepted teaching opposes the use of fruit with milk, but this is an error. Prove for yourself by personal trial that fruit and milk may be eaten together without any harmful results. But if one bite of bread, potato, or any other starch is taken at the same meal with fruit and milk, then undesirable results may follow. When

it is perceived that no ill results follow the eating of sour fruit and milk together the combination soon becomes pleasing. When milk is taken with fruit they may be used together or the milk may be sipped separately, as is preferred.

When fruit may be relished without sweetening none should be added. When sweetening is necessary, raisins, malted milk, or honey may be used; likewise, figs and dates when experience with their use is favorable. Many people have disagreeable results from the use of figs and dates. Sugar, when liberally used with fruit, becomes an irritant which unfits the stomach to receive food at the next meal time.

A fruit meal would best consist of one kind of fruit, though a mixture of different fruits is harmful only as it leads to overeating or is improperly digested by a weak stomach. A very sweet fruit will combine better with another sweet kind than with a very acid one. For the fruit meal as much fruit as is desired may be used, provided always that overeating is avoided.

Incompatible The rich starchy foods and the acid
Combinations fruits have proved to be a harmful
With Fruit combination. The rich protein foods
and the sweet fruits—raisins, dates,
figs, prunes, etc.—also form a disturbing combination.
Cooked fruits and cooked non-starchy vegetables do
not combine satisfactorily when taken by themselves
as a meal.

Apples Apples are among the choicest of fruits. Notwithstanding their value they must be used with caution and discretion, and should not be habitu-

ally indulged between meals or at bed-time. When the stomach action is slow and food remains in it too long the taking of a little suitable fruit or fruit juice may increase the stimulation and reduce the acidity as explained elsewhere (Pages 106, 113-115), thus assisting in emptying it. This fact accounts for the popular use of the apple at bed time with the idea that it prevents constipation.

Tomatoes Tomatoes are one of the best of foods and should have an important place in any general diet. For ease in combining them they should be regarded as an acid fruit. Like other fruits they are best taken raw. When canned, a good way to use them is direct from the can without reheating. By mixing them with crackers as in tomato soup, or with other starchy preparations, as a dressing of flour and milk, their food value is decreased and the mixture usually ferments in the digestive tract.

Rhubarb Rhubarb is not to be highly valued. It is irritating to the mucous membranes if taken in quantities or very often. The final result of the free use of rhubarb is constipation, especially if it is combined with any starchy food. Its use should be limited. Like some other sour fruits it usually calls for more sugar than is wholesome.

Melons Melons of all kinds are to be used as fruit. If very much melon is eaten with any kind of food other than fruit there will be souring of the mass followed by indigestion.

Discussion of Fats

About fourteen per cent of the body weight is fat. It is stored in the body as a reserve food; it may be

drawn upon as fuel to supply heat, and is rather important in this respect; it is a protein saver, and by this is meant the more fat we use as food the less protein is needed—when the fat is oxidized the protein is held in reserve.

There is no doubt it has a place in the dietary and a wise use of fat is healthful. But if one takes more fat than his system demands or can handle, it will initiate digestive disturbances that will in time make him thin.

Foodstuffs containing fat, starch or sugar are worked over to form the body fat. It is not known which of these foods requires the most work for its conversion into human fat. Cream and olive oil are probably the members of this group most easily digested. For this reason they are recognized as efficient fat-building foods. Butter and cream, being more palatable than olive oil, are much preferred.

Heating fat renders it more susceptible to decomposition. Fats that have been heated and reheated are not suitable for use; they easily become rancid in the stomach. Heating fat until it smokes develops in it certain poisonous fatty acids, and for this reason fried fats are usually unsuitable for food.

Fats combine well with all foods but are most acceptable when taken with acids. It should be remembered that their presence in foods or in the stomach with other foods prolongs the digestive process and makes it more burdensome.

Bacon Bacon is an excellent food. It is largely fat, and the curing process to which it is subjected renders it a food which, when taken in small quantities, tends to prevent fermentation in the stomach.

Miscellaneous Food Substances

Leguminous Foods Lentils, mature beans and peas are in a different class from most vegetables, being rich in both protein and starch.

This fact should be kept in mind and when used they should form the basic part of the meal in combination with non-starchy vegetables.

Vinegar Vinegar may be used for preserving pickles, but lemon juice may better take its place in every other way. Vinegar stops the processes of digestion until overcome by the digestive secretions, therefore its use in salads or as seasoning is very unwise.

Pickles Pickles, sweet or sour, may be used with a meat meal. They are a treacherous food, however, and only those who are well should so indulge and then not too frequently.

Pumpkin The pumpkin is a treacherous food that should not be used by one who has weak digestion or is sickly in any way. It sours readily when exposed to the air and ferments easily in the stomach.

Bran Bran is not worthy of consideration as human food, but it may with advantage be used along with other foods to supply bulk. Bran bread, or any mixture of bran with wheat or flour should be regarded as in the class of rich starchy foods. Bran is not a severe irritant nor is it a laxative. It affords a bulk of indigestible cellulose which remains to pass along with the refuse and waste the entire length of the intestines. Such delicate mucous membranes as are irritated by

it would also be irritated by the fiber of green vegetable foods. It is not the easiest of substances for the nervous system and the muscles to move along the intestines, so it must be used with judgment. Even though taken as a laxative, bran may and often does clog the intestines to the injury of the individual. No very ill person should on any account use bran for the sake of affording the intestines a bulk to work upon. If any food be taken by such patients it should be fruit juices with clabber or buttermilk in prime condition; and these foods together with osteopathic treatment and enemas of water, should be relied upon to rid the bowel of accumulations.

One who is well enough to be up and about, but who is using a special diet in which there is little residue after digestion has been accomplished may use bran. It may be taken at any meal and in the quantity needed, but there are some advantages in taking it with the lightest meal. After the patient has resumed the general diet the need for bran will depend upon the means used to establish normal functioning of the intestines. The drying and clogging of bran in the intestines may be prevented by using white mineral oil daily. The oil is neither a drug nor a food but a simple lubricant.

The more the doctor is able to accomplish for his patient without the use of bran, mineral oil and similar materials the better physician he is. The osteopathic physician will find less use for these than will other practitioners because of the advantages of his special treatment. But that physician of any school who has not mastered the details of its use can by so doing make himself more helpful to his patients.

Tissue Salts By tissue salts is meant the mineral elements of food commonly called ash, the most important of which are phosphorus, sulphur, chlorine, sodium, potassium, magnesium and calcium. While these are present in all classes of foods, a diet composed exclusively of the rich starchy foods, rich protein foods and fats does not supply them in sufficient quantities. The general importance of these substances has already received attention in discussing the non-starchy vegetables and fruits, but we desire to emphasize their usefulness in providing material for the acidity or alkalinity of the digestive juices and other secretions, and in maintaining the alkalinity of the blood.

There are certain foods which if eaten alone form acids in the body even though they be perfectly digested. Such are wheat and all wheat products, corn meal and corn meal products, oatmeal, hominy, rice, beef, pork, chicken and eggs. There are other foods which under similar conditions form alkalies in the body. Of this class are lemons, oranges, peaches, grape fruit, grapes, apples, raisins, dates, prunes, cabbage, asparagus, radishes, turnips, cauliflower, carrots, onions, string beans, celery and buttermilk. It should be noted that bread and meat stand out prominently as acid producers while all the sour fruits are conspicuous as alkali producers. Baking soda, an alkali, is often taken into the stomach to make its contents less acid, and it may surprise the reader to know that an acid fruit juice will have a similar effect.

It is neither the protein nor the carbohydrate that constitute the acid-forming and the alkali-forming ele-

ments of food, but these very important mineral elements. The acid-forming elements are phosphorus, sulphur and chlorine; those forming alkalis are sodium, potassium, magnesium and calcium. If the acid-forming predominates over the alkali-forming elements in a given food, it has an acid-forming tendency in metabolism; if the alkali-forming elements predominate, it has an alkali-forming tendency. That sour fruits yield an excess of alkalis is due to their containing an organic acid salt which when oxidized leaves an alkali salt. The composition of the soil upon which a crop is grown greatly influences the amount and character of the mineral elements it contains.

Though foods may be thus divided into two classes, one having acid-forming and the other alkali-forming tendencies, it should be apparent that such a division is based on analyses of the edible part of food in its natural state, which condition is vastly changed by indigestion, incompatible combinations, cooking, or even by preparation for cooking. Any change of the food from its natural state, lessening the amount of its mineral salts, will tend to increase its acid-forming tendencies. So one should largely depend upon raw fruits and raw non-starchy vegetables to provide an abundance of the alkali mineral elements.

The following condensed form of grouping the foods may be helpful, but our present information concerning the ash of foods is incomplete, and future study will doubtless reveal facts of which we are not now aware.

Acid Producers

All flesh foods, including fish, fowl, oysters, clams, lobsters and crabs.

All cereals and their products.

Eggs, bacon, walnuts, and almonds.

Alkali Producers

All garden and orchard fruits.

All citrus fruits.

All garden vegetables.

Milk and all its products.

Peanuts and chestnuts.

From what has been said above it should be clear that those suffering from diseases characterized by acidosis, such as rheumatism, neuritis, glandular affections, etc., should eat freely of the sour fruits. This will be at once recognized as contrary to the usual teaching, and it again brings us face to face with the regrettable fact that not all who dispense information about diet have fully investigated the subject. When the diet is largely of acid-producing foods, the lymphatic fluid sours and the alkalinity of the blood is reduced, which ruins health.

Sodium Chloride Sodium chloride is common table salt, an alkali used very much to excess. When the dietary is correctly planned there is need for little of this salt in the concentrated form. Those who eat freely of vegetables containing much potassium will have need for some table salt. Its harm comes from its action as a condiment, which is to promote overeating.

Water About sixty-five per cent of the body is water.

It assists in bringing about certain important chemical changes, especially those involved in the digestion of food. It serves as a solvent for the solid food-

stuffs. It aids in the regulation of the body heat and also in the removal of waste products. "To accomplish these ends it must be drunk in sufficient quantity. It is a well recognized fact that most people in the United States drink too little water, from which deficiency various ills result." (LONG).

The kidney being the chief organ of elimination, the author frequently instructs patients to take enough water to keep the urine clear, and excepting the first voided in the morning, this should be done. This rule will be helpful to some, but a clear urine *may* be passed by one who is drinking very little water. No fixed rule will cover all cases. One or two pints should be taken in the morning on arising, at least thirty minutes before taking food. Further water drinking during the day may be largely confined to times when the stomach is most nearly empty. Drinking a reasonable amount at mealtime is not a bad practice unless the food is washed down with it. Drinking freely is a healthful practice, but water is no more a cure for disease than are food or drugs. And this is as true of mineral water as of any other.

A clear distinction must be drawn between the drinking of water and of liquid food. All liquid foods—milk, fruit juices, soups and broths—should be sipped rather than drunk. As Tilden expresses it, they should not be taken "in a haphazard way, between meals and at mealtime, mixed with any and all sorts of foods." Serving them in a bowl facilitates sipping them.

Water may be taken cool or warm as desired, but neither very hot nor very cold. If cold water chills, take it warm. If one takes a very cold drink after eat-

ing he thereby retards digestion until the stomach heats the food and water. If his system is capable of bearing the load, he makes no complaint; but if he suffers from indigestion he does not blame the ice water. People take fluids into the stomach much hotter and colder than they realize. When drinking a warm fluid, let it touch the skin of the upper lip and notice how much hotter it feels to this surface than when passed to the inside of the lip and mouth. The fluid has not cooled, but the heat-sensing nerves in the mouth are less sensitive than those on the lip.

The skin as an organ of elimination ranks second only to the kidney, therefore the care of the skin is a measure of very great importance to the health. Bathing, rough towel rubbing, flesh-brush rubbing, are measures that can be applied all the year round and bring better results than will any fad idea carried out spasmodically. A sponge bath night and morning, followed by brisk rubbing, accomplishes the desired results. How cold this bath should be depends on the age, state of health, how much the skin is inured to this treatment, and the degree of rebound or reaction that follows.

Vitalized Air Too little attention is given to ventilating the body internally and externally. The digestion and assimilation frequently improves as the breathing capacity is so increased as to result in a greater supply of oxygen and deeper massage of the stomach and intestines. Foods requiring much oxygen for assimilation are handled best by those who breathe deeply and work in the open air. This applies especially to flesh foods and those made from grain—the rich proteins and the rich starches. Most people recognize that

when actively occupied they need and can digest more food. This is not wholly because of the breaking down of muscle tissue, but also because of the more complete oxidation of the food in the tissues as a result of breathing more air.

When spring has clothed the earth with a rich carpet of verdure, unlocked the leaves of the forest to paint the hillsides, and hung her infant flowers in garden and valley, what is more invigorating than the country air bathed in the fountain of sparkling sunbeams, flushed by the smiles of the laughing leaves, perfumed by the breath of the blossoms, and fresh from its romp over the green carpets? Such air is vastly different from that of a city long under the gloom of the lingering chills of a dreary winter. Its vitalized state is explained by the well known fact that green plants in the sunshine utilize carbon dioxide and freely give off oxygen. This is significant, and means that air penned in an enclosure without green vegetation cannot renew its oxygen, and that to transform it into that pure and oxygen-laden state which we recognize as "fresh air," it must come in contact with green foliage on which the sun is shining. This explains why sleeping in the open air increases the vigor of the infant, and auto-touring through the country often augments the strength of the frail. It signifies that one should live in the open as much as possible. Air in motion supplies more oxygen than when stationary, and a draft is much less harmful than is commonly believed. It is well to sleep in moving air, not necessarily a strong wind, but the slight movement that usually accompanies the out-of-doors air. A properly ventilated sleeping room is one through which fresh air is constantly passing. This is best

accomplished by means of air-shafts or flues extending above the building, the suction resulting in removal of the foul air. With this accomplished, there is little doubt of fresh air gaining entrance. Putting the windows down at the top and permitting the window shades to come down over the open spaces does not properly ventilate the room. The windows and the shades may be up from the bottom to much better advantage; then screens may be so placed as to prevent currents of air directly upon the occupants. One open window does not properly ventilate a room. The air may become cold from this arrangement but a short distance from the window it may not be otherwise disturbed.

People whose systems are filled with poisons easily succumb to every little exposure, and until they have so adjusted their lives as to rid themselves of this toxic condition they may become ill as a result of a current of air through the sleeping room. Before beginning to sleep in a draft such persons should free their bodies from accumulated poisons, and should choose for the innovation a time when the temperature is moderate. Whenever a body throws out signals of distress following a natural procedure like breathing moving air, you may be certain it is because wrong habits of living have developed a condition that is serious indeed. The thing to do in such a case is to reform the habits and live simply for awhile and soon all such harmless and healthful processes may be adopted with benefit.

Catarrh of the nose and throat is maintained and aggravated by breathing air that is too warm. Office buildings, public buildings, hospitals, homes, are all overheated. The resulting harm cannot easily be over-

stated. The body should be so clothed that the skin will constantly be ventilated. Underwear should not be heavy and close fitting. Woolen underwear should not be used at all, not even by those with rheumatic tendencies, for woolen clothing next to the skin hinders its functioning. Silk, linen or light cotton underwear serves well. During the cold weather the legs and sleeves may be a little longer and the weight slightly heavier than during summer, but the difference should not be great unless the exposure is excessive. No change should be made in the fall season until the cold weather has come to stay, and similar caution should be exercised in the spring. The skin will react to the cold of the first few days of fall if given a chance. One may be somewhat uncomfortable at this period but will not catch cold, if the skin is active and the body clean and wholesome inside and out. The skin will become thicker at once and the hairs on it will grow rapidly, provided warmer clothing is not put on. Suitable outer coats and wraps should be used to provide against exposure on passing from a warm room into severe wintry weather.

Bed clothing should be changed on a similar plan. Woolen blankets may be used with less inconsistency than woolen underclothing, but they should be used only in the coldest weather. Night robes should be loose fitting, and too much covering should be avoided.

Inhaling the coldest air of winter when sleeping is an exposure to the bronchial tubes and lungs, though it may not endanger those tissues when one is active and maintaining a more vigorous circulation of the blood. A room having many windows, if properly ventilated, is better than an open sleeping porch. Some heat may

be provided when the temperature is lowest, but this does not mean that windows are to be closed and the room kept warm.

Air baths as a daily measure are excellent and often can be conveniently taken for a few minutes morning and evening, if the matter is given sufficient thought. On arising in the morning, the cleansing of the teeth and the morning drink of hot or cold water should be immediately followed by a cool sponge or tub bath and a brisk rub. Then every toilet measure or other morning duty that may be carried out in the sleeping or dressing room should be attended to before the clothing is put on. In the evening when the clothing is removed the gown should not be put on at once, but a cool sponge bath, a rub, and numberless little duties that are usually carried out before undressing should be attended to while nude. It is attention given to the skin daily the year round that counts, and this is why it is necessary to adopt a routine providing for such care.

Illustrative Menus

Daily That the meaning of certain terms as used
Dietary in this connection may be clear, their definitions are herewith given: A *starch meal* is one consisting of the rich starchy foods combined properly with other foods. A *protein meal* is one of rich protein food properly combined with other foods. A *fruit meal* is composed chiefly of fruits in proper combinations with other foods. A *vegetable meal* is formed of non-starchy vegetables, or non-starchy vegetables and sweet milk; vegetable soup is the best illustration. A *full meal* is a starch or protein meal. A *light meal* is a fruit or vegetable meal. A *regular diet*

is a daily routine of one fruit meal, one starch meal and one protein meal. It is more important to plan intelligently the eating for the day than for any one meal, and in determining the menus for the day account should be taken of those of yesterday and tomorrow.

Whatever the kind of labor performed or however hard, no one needs three full meals in one day. One light and two full meals, or one full and two light meals will supply all the food needs of the body for twenty-four hours.

When the winter season is breaking into spring and the system is laden with an oversupply of heat-forming foods, as is usual at this period, fruit or vegetable meals should be taken twice a day until all evidence of accumulated poison has disappeared. This dietetic measure is a great preventive of spring diseases, far better than a drug "tonic."

When the summer heat is trying and the vitality of the nervous system is lowered, but one full meal a day should be taken with one or two light ones. It is a most excellent plan to take but two meals a day, though this plan should not be followed by those who overeat as a result of it. When eating but two meals a day, one should be a full and one a light meal. For one day the full meal should be a starch meal and the next day a protein meal.

If one eats heartily, the next meal should be omitted or should be a light one. A full meal of starch may follow a full meal of protein, or the reverse, provided that both preceding and following, only light meals of fruit or non-starchy vegetables are taken. But two successive full protein meals or two of starch should be avoided.

When one eats a meal of heavy food such as corn bread or baked beans the other meals of the day should be light.

A large amount of simple food or a small quantity of rich or heavy food may unfit the stomach and digestive apparatus to receive sustenance for a longer period than the usual interval between meals, and any food imposed upon a digestive system so fatigued becomes a poison instead of a nutriment. If the stomach is not in condition to digest, nothing put into it can be properly used.

When trying to overcome disease and at the same time carry on the usual duties of life, the plan of full and light meals must be adjusted to the needs of the case.

A limited number of menus are given to elucidate the foregoing ideas and to clarify some points that otherwise might be obscure to the reader.

Starch 1. Toasted yeastless bread, butter, green corn,
Meals green peas, lettuce, with a dash of salt.

2. Fresh soda biscuit, butter, honey, and milk, the latter to be sipped after eating the biscuit.

3. Baked potato, butter, cooked onions, cooked turnips, and a salad of lettuce, celery and cucumbers, dressed with salt.

4. Hot baking powder biscuit, asparagus, cauliflower, dessert of ice cream.

5. Dry toast, creamed new potatoes, spinach, asparagus, chopped cabbage and lettuce.

6. Shredded wheat biscuit with melted butter to be eaten as bread; cooked green corn, cooked onions (baked or stewed, not fried), raw cabbage dressed

with juice from either or both of the cooked vegetables.

7. Corn bread, butter, stewed egg plant seasoned with crackers, stewed beets, lettuce, dessert of ice cream.

8. Plain cake of any kind without icing, salad of lettuce, cabbage and cucumbers, dressed with salt; glass of milk.

9. Toasted bread, butter, bacon, glass of milk.

10. Plain cookies, two cooked non-starchy vegetables, milk, ice cream.

11. Cereal flakes eaten dry with melted butter, radishes, lettuce and cucumbers; dessert of cup-custard, or banana pie.

12. Three medium sized hot griddle cakes, syrup or honey, milk. Lettuce may be added if desired. (For use on griddle cakes, strained honey may be slightly thinned by adding hot water).

13. Fine quality doughnuts, raw vegetables, milk.

Ice cream is the choice of desserts for starch meals. Occasionally cup-custard, baked bananas with whipped or plain cream, banana, custard, chocolate or apple pie may be used by those who are not ill.

Protein Meals 1. Stewed chicken, creamed onions, green beans, and a salad of lettuce, celery, cucumbers and lemon juice. Dessert of berries.

2. Roast lamb, corn on cob, cauliflower, and a salad of lettuce, pineapple, and raw apple, dressed with salt and the juice of some fruit.

3. Vegetable soup (taken without starch), two eggs, stewed turnips, spinach and slaw.

4. Roast beef, sliced tomatoes, carrots either raw or cooked, asparagus, cranberries.

5. Baked beans and a vegetable salad.

6. Baked fish, tomatoes, egg-plant, and a vegetable salad.

7. Custard, canned corn, green peas, vegetable salad, fruit whip.

8. Nuts, a salad of vegetables with grapes or berries dressed with sour cream.

9. Vegetable soup taken without starch, cream cheese, a vegetable salad.

Occasionally ice cream may be used as a dessert for a protein meal, but the usual dessert should be a sour fruit or a salad.

A fruit salad may be used instead of a vegetable salad when desired, if one keeps in mind that raw vegetables are quite necessary in the diet.

Vegetable Meals 1. Vegetable soup made as directed and eaten without the addition of anything.

2. Vegetable soup to which when served is added finely chopped raw cabbage.

3. As much as may be desired of any one of the salads given under the heading of non-starchy vegetables.

4. Any group of cooked vegetables. They may be cooked together if desired, especially those that are known to improve in taste when cooked together. Parsnips may be stewed until done, then browned in the oven and eaten with butter as the basis of a vegetable meal, the parsnips to assume the place of the usual bread. (It should be noted that while a person may readily digest vegetable soup he may grievously fail to digest two or three of the non-starchy vegetables taken alone as a meal.)

Sour or sweet milk may be combined with either of the above menus.

- Fruit** 1. Sliced oranges, all that are desired. One
Meals or two glasses of milk.
2. Uncooked prunes, milk and cottage cheese.
3. Baked apples, uncooked raisins, milk.
4. Oranges, apples, and pineapple cut up together. Buttermilk, as much as desired.
5. Cherries, sweet or sour milk, or cream.
6. Stewed prunes, sweet milk, cream cheese.
7. Strawberries, cream, lettuce dressed with salt.
8. Raw apples, raisins, cream or milk. (The milk and raisins may be added to a bowl of sliced apples.)
9. Berries sweetened with jelly, cream.
10. Plain tomato soup and other cooked fruit, milk.
11. Dewberries dressed with sour cream, lettuce.
12. Raw sliced tomatoes sweetened with raisins, milk.
13. Cantaloupe, berries and whipped cream.
14. Watermelon, as much as may be desired.
15. Watermelon, raw tomatoes, lettuce.
16. Any raw fruit and raw non-starchy vegetables.

Celery, raisins, ice cream or cheese may be added to any of these menus. If cheese is added the quantity must be limited and any discomfort or distress should serve as a warning not to repeat the error.

These are called fruit meals because the basis of the meal is fruit. Not everything mentioned need be used for the meal, but if anything is to be omitted it should not be the fruit. Such a meal may be used morning, noon or night. But in the author's opinion

the breakfast should be the lightest meal of the day. No rule of this kind can be made to fit the needs of all. There are people who could better adjust themselves to circumstances by making breakfast the heavy meal.

Indulgences Throughout this book the author has frequently sanctioned the limited use of a questionable food and cautioned against its habitual use. This is more in the nature of a concession than a recommendation. But few people will altogether relinquish the use of favorite dishes, and it seems wise to state how they may be eaten with the least harm. When it is said that pickles, corn bread, shortcake, etc., should not be employed too frequently, the statement is relative. If one indulges in pickles today he should be feeling quite well before permitting himself to eat pancakes or shortcake. The use of any indulgences of such nature must depend upon one's ability to handle them properly, and it should be kept in mind that pain is not necessarily present as a result, but that the indicator of trouble may be one or more of numerous symptoms less noticeable than pain.

Pancakes cannot be eaten every morning for weeks without injury. They should not be taken oftener than once or twice a week. This is also true of corn bread and of many different combinations that tax the digestive powers and the nervous system heavily. If one eats pancakes or corn bread for breakfast he should not eat baked beans for supper that day.

Hot cakes may be a wholesome meal, but too often they are not. In order to be beneficial they must be made of good materials and be thoroughly light, of proper texture, and well cooked, instead of being heavy and pasty. They should be eaten with butter, and if

anything additional is used on them it should be a little honey. No syrup of any kind. Enough pancakes should be taken, together with a glass or two of milk, to constitute the entire meal, though raw non-starchy vegetables such as lettuce, celery, cucumbers or radishes may also be used.

Strawberry shortcake, peach cobbler, apple dumplings, plum pudding, fruit pie, and all starch and fruit mixtures may be classified together as undesirable combinations, unfit for the complaining stomach. The best way to use such food is to make the entire meal from it in combination with milk and raw non-starchy vegetables, sipping the milk after eating the desired quantity of the mixture. It should be used as a light meal and should not be repeated too often. If there is the slightest sign of disturbance after a meal of this kind the next meal should be omitted or it should consist of fruit only, or raw vegetables only. Eating according to the regular routine should not be resumed until all symptoms aroused have disappeared.

If a child should be at table where such food is displayed, and it is intended to give it this food, it is a mistake to withhold it until the child has eaten a full meal of other things, for overeating will then be inevitable. Permit the child to eat freely of the fruit mixture, then sip milk, and eat raw vegetables, if it desires them. Make the entire meal of the fruit mixture, milk and vegetables. This usually satisfies the child's appetite and is much better than a full meal of bread, butter, mashed potatoes, chicken, gravy, etc., followed by pie or a dish of some fruit mixture, as strawberry shortcake.

Pies other than fruit or cocoanut may be used as a dessert for a starch meal, but it is better to eat them

in the same manner as a fruit pie—make them the basis of a meal of which milk and raw vegetables are the remainder. Custard, banana, banana-custard, and chocolate pies are among those more appropriate as a dessert with a starch meal than the fruit pie. Apple and huckleberry are among the best fruit pies that may be used with a starch meal.

In a similar manner many questions as to the use of puddings and various other mixtures may be answered. It is not absolutely necessary to do away with all these delicacies, but it is urgent to give them a suitable place in the dietary of the healthy and to deny them a place in that of the sickly.

Candy has already been spoken of as an unsuitable food. The sick must not indulge in it at all. When taken by those who are well or in fair health it should form part of a fruit meal. Candy will go with fruit better than with any other food, and children especially should not be permitted to take it between meals nor with any except the fruit meal.

The use of all *condiments* and of all dressings of which they form a part should be discontinued. Of their harmfulness there is much to be said. They are builders of wrong habits of living, and are thus health destroyers. They possess no food value. They overstimulate the taste-buds and thereby induce overeating. And not only this, but overstimulation—and especially that by condiments—tends to immorality, in addition to its other harmful effects. In view of these facts the use of condiments by anyone aspiring to a wholesome and natural life should become a thing of the past. Food will seem more tasty without them as soon as the abnormally stimulated palate has regained its normal condition.

HOW TO APPLY DIETETIC PRINCIPLES

In endeavoring to personally apply the ideas herein outlined, be sure you have gained your bearings, squared yourself with the situation, and that you know what it all means and what you are about. A short time ago these ideas were presented in writing to a patient who at once declared he had been on this diet for two years, and a week later he repeated the assertion. Then the author asked how many times a day he had eaten bread during these two years. He replied, three. Even after reading and studying these fundamentals he did not see that to eat bread this often was contrary to the ideas presented. Another patient supposed to be eating one fruit, one starch, and one protein meal a day, asked the author what he thought of strawberries. When assured they were a wholesome food, he immediately confessed to eating them three times a day. And this is about the way fifty per cent of patients will follow a diet prescribed by a physician. They are accustomed to being told, "Don't eat much meat," "Don't eat any sour fruit," "Eat plenty of lettuce," etc., and think they are "on a diet," when they carelessly follow such inconsiderate admonitions, eating just as usual in every other respect.

There are those having the appearance and bearing of intelligent beings, who will read every word carefully and declare they are following out each idea in full, but who still eat abundantly of bran while drinking little water and taking no mineral oil; they will put sugar on their breakfast oatmeal; they will eat bran bread three times a day, take a little coffee

as usual, or a piece of cake with a meat meal, or take bran bread with fruit.

The author is frequently addressed in this manner: "Now, doctor, just tell me exactly what I should eat and I will follow your directions to the letter." The patient is sincere, but is laboring under the impression that the only thing necessary is for the doctor to say: "Eat much of this or that; this food is good for you," etc. If given such instructions they simply add a liberal quantity of the food mentioned to what they are in the habit of eating, believing they are fully following instructions. It should be clear that such methods do not constitute an intelligent use of diet. In fact to properly lead a sick person into healthful habits of eating requires work—patient, persistent, painstaking work; instructions must be written out explicitly and the manner of following them carefully watched. Service of this character is not being rendered by every physician, and fortunate is that sick person who receives such assistance; and he who is reluctant to pay extra for it lacks proper appreciation.

Those who adopt any plan of living differing essentially from the usual custom should not permit the innovation to disturb their perfect poise among their fellows in society. No member of a family is justified in forcing to the front his own ideas of eating, to the discomfort of the others. People must be taught, but the meal time is not the best time for teaching. If it is necessary to discuss dietary ideas at the table for the sake of teaching children or others, it should be done with kindness and consideration, and as briefly as possible.

When a strict regard for one's physical condition would deny any indulgence, one should decline invitations to dine with others, to attend banquets, or any social function where refreshments may be served. But it should be observed that it is the habit rather than the single act that kills, and there is no reason why one taking a single meal with others, cannot eat very much as they do, and not suffer for it. When one is eating occasionally with others he should use such discretion as his good sense may dictate—if desirable to do so he can usually combine his foods differently from the others without making himself conspicuous. And if this is impossible, what is taken may at least be eaten with enjoyment instead of grouchiness. A wrong combination merrily eaten is incomparably better than a wrong or even a right combination eaten crabbedly. The mental attitude is as great a factor in promoting health as is the selection of proper food combinations.

It should be apparent to the thoughtful that no specific instructions for feeding the individual case of sickness can be satisfactorily written into a book. It can be stated as a general proposition widely applicable that no one prostrated with illness should partake of any food. But just when food should be administered in illness, just what it should be, the most desirable method of preparation, just how the invalid should be fed, and the diet that should be followed by those not sufficiently ill to be in bed, are all matters to be referred to the physician. Entering into each case are so many factors which cannot be foreknown or safely surmised that no other course is safe. All of which means that the physician must be a master of

the dietary. The lines along which he may obtain information and acquire skill may be pointed out, but in the present state of our knowledge of physiological chemistry and nutrition much of his skill must be gained by experience.

A proper history of the manner in which people have been living, and an accurate diagnosis of the diseased condition present will often determine the character of the special diet needed and indicate the class of foods to be avoided for the longest time. A patient poisoned by the decomposition of protein or the fermentation of starch, or a combination of the two, presents to the physician the problem of determining how far the symptoms are due to overeating in general, to excessive use of one class or variety of food, to a lack in the diet of certain food elements, to faulty digestion and elimination due to osteopathic lesions, or combinations of these factors. As yet we cannot go very far in answering all of these questions with certainty, and they present a fruitful field for research.

I desire to again emphasize that the misuse of information on the subject of diet does a great deal of harm. People are looking for a diet that will cure, but no one has ever been cured by a diet. There is no food that will cure any known disease. It is true, however, that the proper use of food may assist recovery when its abuse will assure an early death.

People desire a special diet which will produce immediate results and within a few days restore them to health and permit them to resume their former food and habits immune to dietary transgressions. They combat the suggestion of any permanent restriction

upon the gratification of their appetites. In some cases relief may be obtained in hours, but if diseases have been years in the making, one may be assured they will not be cured in weeks or even months. Results of some kind do immediately follow a radical change in the dietary, but first results are not always such as the patients desire. It requires from one to three months to become accustomed to a meal without bread or other starch; while some persons require that long or longer merely to become adjusted to a lessened stimulation. The author believes it is well to let cases go to other physicians rather than to give encouragement which a proper treatment will not justify.

It is as great a mistake for the physician to prescribe a special diet without teaching the patient how to live so as to avoid a return of his trouble as it is for a surgeon to cut out an appendix, or tonsils, or adenoids, and discharge the patient without teaching him how to rid himself of the roots of these various ills. People are too prone to be satisfied with the cutting away of diseased tissue while the cause of it is permitted to remain undisturbed.

Among the many things to be considered in prescribing the diet for one who is ill the author does not regard the cardinal symptoms of the disease as occupying a very important place. That is to say, he would not expect one diet outline to be equally applicable to all cases of pneumonia, another one perfectly suited to asthma, and yet another one to heart trouble, etc. A clear view of diseases reveal them to be strikingly similar, and the overlapping of dietary outlines to be followed in different diseases may wholly harmonize

with the other factors to be weighed. It would appear that all diseases characterized by acidosis should be dietetically treated largely with foods which by the digestive process are changed into alkalies; but such a plain proposition as this does not always hold, for the author has observed that certain frail bodies so afflicted may for a few meals or days digest milk toast, grape nuts, or cream of wheat, more readily than fruit.

Special Diets and Fasting

Fasting, or special diets, may benefit and satisfy for a time, but a knowledge of right eating for the purpose of living well, comprehends more than these.

The advantages gained by any special diet is primarily rest to the nervous and digestive systems. There are secondary results also accomplished by it, such as rejuvenation of the mucous membranes and glands of the digestive tract, changes in the intestinal flora, blood, lymph, etc.

A diet limited to fruit or fruit juice is quite a different thing from an absolute fast. Such a procedure is to be considered as a special diet or fruit-fast. There are many special dietaries and no one may be considered the best in every respect. A physician's success through prescribing any one of them will depend upon his mastery of it. There are so many things to be learned about the body's reaction to food in health and in disease that when a physician has learned how to use successfully any one food as a special diet he finds this knowledge so valuable that he often assumes it to be a cure-all.

Fruit A diet of this nature is a more practical
Juice measure in every way than a long-continued
Diet absolute fast. As much as may be desired of
lemon juice diluted with water until there is no
need for sugar is to be taken for breakfast. Whether
relished or not at least two glasses are imperative.
Pineapple juice and water in equal parts are
given at midday and for the evening meal, using from
one-half to a full glass of the juice. Water is to be
taken freely between these meals of fruit juice, and
if desired, a little lemon juice may be added occasion-
ally to remove mucus or any disagreeable taste from
the mouth. While restricted to this diet if the bowels
do not move naturally and thoroughly they must be
flushed regularly with the enema of water. Water
either with or without a teaspoon of salt to the quart,
may be used for the enema, which should be taken once
or twice daily.

This routine is most useful when the illness is not
sufficiently serious to require the absolute fast. It is
also of use in the initial treatment of chronic condi-
tions where a special diet is needed for a short time.
Patients will often be benefited by following this prac-
tice for a week or more, continuing their regular work
meanwhile. These fruit juices will keep up some
activity of the intestines, and if this can be supple-
mented with daily osteopathic treatment, thorough
daily bowel movements will usually follow. When the
patient is not confined to bed it is often wise to use
bran and mineral oil with fruit juices. How much of
either must be determined by experience. One table-
spoon of oil will suffice in most cases but three or more
are required in others. If too much oil is taken it will

move along the intestines by itself and may pass the rectal sphincters without warning. A tea cup three-fourths full of bran will not be too much for an adult though half a cup will often suffice. Too much bran may clog and overdistend the intestines.

When the usual quantity of food is reduced there will be a decrease in the peristaltic movement of the intestines, and hence a tendency toward the accumulation of waste and absorption of poisons therefrom which may intensify the severity of the symptoms of the disease. Such untoward results should be avoided by the means best suited to the case, whether osteopathic treatment, the enema, bran and mineral oil, or other reliable measure, but in any event the intestinal contents must be kept moving. If all food is denied, or if fruit alone is given, the waste material in the intestines will soon become comparatively free from poisons. This is why a patient, so ill that nothing can be assimilated, improves without food. Even though none at all is given the intestines will still act a little, and often more than one would suppose. The accumulated waste will finally be carried into the colon and the enema will remove it. The next waste accumulated, entering a clean tract will then be less obnoxious or harmful. The use of a special diet of fruit is often for a time attended by distention of the stomach and bowels with gas, the result of imperfect digestion, and of the escape of gas from the surrounding tissues into the intestinal tract.

If fruit juices have been the special diet used, when the time for a change has arrived the patient may first be given fruit for all three meals, followed later by fruits for two meals and non-starchy vege-

tables for one, and this routine followed by fruit for one meal, buttermilk for another, and starch and non-starchy vegetables for the third. Then protein may be added to the diet when improvement warrants.

But this is only one of many methods of procedure. Not infrequently the patient may be put at once upon a *regular* diet—one fruit, one starch, and one protein meal. In some cases it is wise to deny patients the rich starchy foods for one or two months, using only fruit, vegetable and protein meals. One must understand that the patient gets some starch from the non-starchy vegetables, so this is not a wholly starch-free diet. Sometimes it is better to withhold the rich protein foods for one or two months, using fruit, vegetable and starch meals; and it should be remembered that as there is some protein in the non-starchy vegetables, neither is this a protein-free diet.

There are so many details involved in the various ways of changing a patient from a special fruit to a mixed diet that it would require a volume to enumerate and describe them.

Fruit Fruit and sour milk form a special diet of great value, and one of the best for many people. It
Milk is more general in its application than any other, and is the one preferred for many chronic cases. Its use can be continued for a long time while the patient remains at regular work, but it is none the less appropriate for some very sick patients.

Such a diet establishes conditions favorable to the recovery of the colon from any effects of previous abuse, and permits the re-normalized secretions of the mucous membrane to eliminate much of the evil results of putrefaction and undue fermentation. A

judicious use of bran and white mineral oil with this special diet is sometimes desirable, as these provide some bulk with lubrication, and undoubtedly promote a faster movement of the waste materials through the large intestine. But such favorable results as may follow their use in reality come about through the rest given the overworked stomach and bowel in such manner as to prevent accumulation or absorption of waste—not because certain bacteria have made a hasty exit from the bowel. The bacteria leave not because of the substances in the buttermilk or fruit, but because the rested organs are digesting and absorbing the nutritive elements in the food taken, instead of passing them along to the colon, and as a result the putrefaction and undue fermentation of the food elements have ceased.

The fruit and sour milk may be used alternately, making a meal of one exclusive of the other, or they may be combined at each meal. Good buttermilk is quite satisfactory for this purpose, but if it is too sour or otherwise faulty the results will not be pleasing. Unfortunately it seems impossible to procure buttermilk uniform in quality day after day. There is no better sour milk than clabber. When the cream has been removed from it and the skimmed clabber stirred with an egg-beater or cream-whipper its appearance and taste are almost identically as buttermilk and the results of its use is even better. The aeration of buttermilk by churning accounts for its tasting differently from clabber that has not been as thoroughly shaken.

There is among adults much prejudice against the use of sour milk, and there are many children who reject it for one reason or another. Children may be taught to relish the taste of buttermilk by first serving

it sweetened with raisins, tomato or other preserves, or melted fruit jelly. There are those who think of clabber as they do of decomposed meat. Pure milk changed only by becoming sour is not a spoiled food. Sometimes the mental attitude is such that it is not well to prescribe it at once. It is often quite possible to gain the confidence by other means, following later with the proper diet. To refuse to assume charge of a patient because of early signs of antagonism would be an unpardonable blunder, for often steadfastness of purpose and proper teaching are all that is needed. But the physician should be the physician; if he is not, who shall be? He should also be a teacher, so far as he finds his clientele to be teachable.

Patients can be taken off this special diet much as was suggested for taking them off the fruit juice diet. Those thus treated should thereafter be taught to eat in a way more conducive to health than was their former custom. They should be kept under observation and instruction until they follow intelligently some healthful plan of eating that may be continued for the rest of their lives. What the author describes as a regular diet—one fruit, one starch, one protein meal daily—serves well this purpose. If this can be used as a central idea, being varied as necessity may require or as observation and experience may indicate, it will afford a very liberal general diet that will not build disease.

Fruits and Vegetables Raw fruits and raw non-starchy vegetables constitute a very excellent special diet. The two may be combined to form a meal or they may be used alternately, the fruit for

one, the vegetables for the next meal. Either of them may be prepared in various ways.

Any of the non-starchy vegetables relished raw may be used; the more common are lettuce, celery, cabbage, turnips, onions, radishes and carrots. By slicing, discing, or shredding they may be made very attractive and appetizing. They may be served with a dressing of sour or sweet cream and salt. The juices of raw vegetables are very bland and soothing to delicate and inflamed mucous membranes, and a diet of them properly eaten is most excellent for an irritable stomach.

When one is upon a diet of this kind, very great changes in the blood rapidly take place just as occurs with a diet of fruit and sour milk. This is not because of any change in the intestinal bacteria, but because the body is no longer called upon to absorb and afterward eliminate products of fermentation and decomposition. There is no particular medicinal virtue in these foods or in the mineral salts they contain, aside from the fact that they are wholesome, bland and palliative to the weakened mucous membranes. Their greatest value lies in the fact that because of their inherent qualities their use gives the digestive system a much needed rest while maintaining some functional activity. They promote healthful secretions and so assist the glands of the body to purify the blood.

Milk Diet By some, milk is used with success as a special diet. It requires special knowledge and careful attention to properly give milk to the sick, if indeed such a thing can be done. It is usual to start the patient on two or three quarts and increase the amount until it reaches five or seven quarts daily.

Every half hour during the day a small quantity is sipped slowly until the full amount is taken. The best results seem to accompany the use of plenty of acid, preferably lemon juice, with the milk.

The author in his practice used milk as a special diet for a year or more, having patients on it from one to six weeks, and with benefit. It has the advantage over other diets carrying a similar amount of nutrition of being much less likely to change to violent poisons within the body. If milk should by any chance unduly ferment and decompose after ingestion, the resulting products are less detrimental than are those of many other foods. There is no doubt that milk alone is far preferable to the hodge-podge of food used by many sick people, but in general it may be said that any results obtained by the use of a large quantity of food should be regarded with suspicion. The author regards foods less complex, less nutritious, and which make less demand upon the digestive apparatus as more suitable, and he finds the change from a special diet of this kind to an ordinary healthful routine that can be followed for life is easier for the patient than such a change from a milk diet.

Fasting Fasting is a measure the proper use and direction of which every physician should learn; for every physician has patients whose best interest demands that he conduct them through at least a short fast. There are times when the sick should not be given one mouthful, not even fruit juice; but happily such conditions rarely persist for long. The occasions for such abstinence must be determined by the physician from his knowledge and experience.

The author was called to the bedside of a man who without trained supervision had then fasted for twenty-seven days and was very ill. He recovered, and proved to have been benefited by the fast, but no doubt had competent and experienced supervision been retained he could have fasted even longer without the prostration and nervous exhaustion displayed. A lady who upon her own initiative had fasted twenty-one days became dangerously ill. Though she recovered and finally became stronger than formerly, there is no doubt she could have extended her fast much longer without serious results had it been wisely directed. The author has supervised numerous fasts of from thirteen to eighteen days' duration but he now seldom carries them to this extent. He now looks with disfavor upon the complete fast, and especially the long one. To be sure it is a better and wiser procedure than numberless others now being advised and followed, but it is not the best.

When breaking a fast which has continued for fifteen or more days, it is well to make the first meal or two of the white of egg rather than of fruit juice. This may be beaten, or strained through cloth and mixed with water. Fruit may soon follow, but if for any reason it seems irritating substitute raw vegetable juice or vegetable soup.

Physicians who limit the diet of their patients or withhold food for a few meals find many persons who, sick or well, have never in their lifetime missed eating a single meal. They fear something serious would result should they fail to eat. These people should learn that there are many diseased conditions in which Nature compels a fast so far as the body tissues are

concerned, even though food be passed into the stomach and through the body.

It is well to recall that the digestive tract is a tube, and that it is collapsed except when distended by food, gas, refuse or waste. It is coiled at some places and enlarged at others. Were it straight, open, and empty, one could see through it from end to end. With these facts in mind one can understand how food is still essentially outside the body even though it be inside the stomach or intestines. It is not truly within the body until it has been absorbed through the intestinal wall.

When one is very ill the absorbing and assimilating activities are arrested and remain irresponsive to the stimulus of the presence of food. It may be that not one particle of any kind of nutrient material passes through these intestinal membranes. The mere fact that food taken into the stomach changes as it passes along the digestive tract does not prove that any of the material is taken up by the system. During serious illness food is an additional burden upon the nervous system, and that without recompense. Such a burden forced upon the nervous system when it is most in need of rest, is only too often the price of life. The refusal of the intestine to absorb food will be in proportion to the severity of the prostration and the ability and capacity of its lining membranes to respond to the dictates of the nervous system. The author firmly holds the opinion that in many cases for days at a time the intestines will absorb nothing but water, no matter what else it may contain. In conditions less severe certain of the nutrient substances may be absorbed and the rest rejected, for it cannot be disputed

that some of the cells of the body have a selective power.

Solicitous for the welfare of the sick, Nature often forces a fast regardless of the fears of patient or physician. If food is not needed by the sick the system will either initiate such a loathing for it as will prevent eating, will eject food forced upon it, or, failing in that, will refuse to digest, absorb and assimilate it. If so burdened with disease that it cannot make use of food, the system will endeavor to prevent its entry into the body proper, even though the digestive tract be forced to receive and to dispose of it. In this effort it often fails through the breaking down of the protective mechanism of the mucous membrane. It is this failure in self-protection, together with the loss of the energy used in getting rid of the unwelcome food that explains the loss in weight of sick people who continue to eat plentifully, as for example, tuberculosis sufferers "dieted" upon more than twice the usual amount of "good nourishing food."

If food taken in fevers is used by the body to keep up its strength, why does the fever patient invariably become weaker until the condition which caused it has so improved that fever no longer exists? If the taking of food prevents weakness, why will one who has never missed a meal become sick and weak? The misapprehension that omitting a few meals will dangerously weaken a sick person should be dispelled. The belief that food taken when one is ill can be of any benefit to the body should be corrected. If the reader will but closely observe results in his own case, he soon will have come to know that food ingested when he is feeling ill is received with a rebuke.

It is true that a headache will sometimes disappear when food is taken, that the sense of weakness will vanish, a certain buoyancy will follow, etc. The reaction to the temporary stimulation gives the transient rebound, and this is often wrongly interpreted as proof that the food was needed. It is a case of the body reacting to the stimulus of food as a tired horse reacts to the lash, being but the weaker for the effort.

Many people think they are fasting when regularly eating some light food such as fruit and milk. One of the author's patients informed him that because she knew the author had fasted a friend who was similarly ill, she herself had begun fasting. On inquiry it was disclosed that for breakfast she was taking one fried egg, one slice of toast, and one orange, followed by hot water. The luncheon consisted of one egg, one slice of bread, half an orange and green onions. The dinner was one egg, one slice of bread, and half an orange. This was so great a reduction in the quantity of her food that she was perfectly sincere in the remark that she was fasting.

Troublesome Symptoms

If the reader supposes a physician's trouble is at an end when the patient's diet is properly outlined, it would be well to disabuse his mind at once. When the usual bulk and the customary stimulation are withheld, Nature makes a protest and the patient emphasizes it. Fear, distrust and dislike for such measures always add very much to the real distress. A feeling of languor, a gnawing, a heaviness, an ache or knotting of the stomach, headache, nausea, and many other disagreeable symptoms will be found singly or together to follow a fast or a marked decrease in the amount of

food. The patient will usually interpret most of these symptoms as hunger or weakness. And curiously enough food will generally relieve the distress.

The physician should be able properly to interpret for the patient these disagreeable features of the treatment, and so to conduct the case that they will be minimized. Many of them may be relieved or palliated, if understood. It should be known that all these symptoms mean disease. If disease were not present, no distress of any kind would follow a short abstinence from food. Much of the usual distress is brought about by a catarrhal condition of the stomach membranes. The diseased stomach being empty, its walls are in close contact and become hot and feverish, and the glands and cells secrete a thick, sticky, tenacious mucus. The feverish condition accounts for the distress, and when the mucus is considerable in quantity its presence accounts for the nausea. In this condition distention with water, preferably hot water to which is added lemon juice, will give relief, which will probably last but little longer than the time the water remains in the stomach; then the distention must be renewed and maintained until the next meal time, or the distress will reappear. Proper distention in these cases usually requires the taking of from three to six glasses of water.

If, in a well nourished person, the chief complaint is weakness this must be understood to be more apparent than real, being the natural effect of a lack of the accustomed stimulation. When so caused, or even when due to actual food-poisoning, the sufferer will do well to patiently endure this discomfort until Nature overcomes it.

“The weakness that is persistent, and continually in evidence, even when the patient is in bed or sitting quietly, and the weakness known as getting up tired of a morning, are both produced by overstimulation—food-poison.

A weakness that comes from lack of nourishment is not accompanied by ill-feeling. When the patient is lying down or sitting, he feels that he is about as capable of almost any feat of strength as he has ever been; yet, when he undertakes to do anything, he finds that he has scarcely strength to stand without support. This is the weakness that food will cure.” (TILDEN).

Not everyone fasted or placed upon a low diet will experience a weakness, for there are some who become stronger upon decreasing the amount of food.

Another important result is that it often uncovers a latent or intensifies an active constipation. If such be tolerated many of the symptoms of which the patient complains will be increased in severity. It is wise, before beginning treatment, to explain to the patient what is meant by a latent constipation and to take such precautions as will prevent the trouble becoming worse. This can usually be done, though there are cases where it seems impossible, and in which for a time some symptoms will be worse, and constipation may be one of them.

A common result causing much uneasiness is loss of weight. This is inevitable in nearly all cases, the amount depending somewhat on the extent to which the patient is diseased, and the total of the change in diet. A few on a reduced diet will gain in weight from the start. The loss will be temporary for those under weight and permanent for those over weight. Those under weight will begin to gain just as soon as the dis-

eased condition is sufficiently under control to permit re-establishment of the normal assimilation of food.

The author will fail in the task set for himself if he does not make it clear that *any* radical dietetic measure may lead to trouble very surprising to both patient and physician, but which the onlookers are usually sure of before it occurs; at least their remarks afterward would lead one who took them seriously to believe they knew in advance all about it. Very few cases will show anything unusual not already indicated. But some cases are like a gas bomb—all ready to explode—and whatever may be done, that will be the match that lights the fire, and if nothing at all is done, a few hours' time will bring about a spontaneous explosion. The patient will begin vomiting, or develop a high fever, or be attacked by a deceptive and unexplainable pain; the heart rate may increase very greatly, sleep may be impossible and various other manifestations may occur, all more or less serious to the patient and confusing to the doctor, who will consult his best authors on the subject only to find their writings betray no indication that they ever had any trouble under similar circumstances. The literature touching the subject of fasting and radical measures in diet has so unmistakably failed to meet squarely the issue raised by the protests of Nature against the sudden changing of a fixed habit, that these measures are unjustly held in disrepute by physicians and laymen alike.

A short fast, a fruit-fast, a fruit and buttermilk diet are all radical measures, but not nearly so radical as many other therapeutic procedures nor so dangerous as the usual drugging. Drugs so mask symp-

toms that the only clear picture of disease one gets is when the system is entirely free of these "remedies." The truth of this statement cannot be successfully disputed, yet what wonderful revelation of the prevailing ignorance does it disclose; for how very few study disease in patients who are not taking drugs. In truth *it is only the drugless healers who can have information of this kind.*

There are many who stand ready to condemn the radical change in diet because it may lead to disagreeable symptoms. But an accurate knowledge of the condition of the patient and what has brought it about, would change the views of those who denounce these measures.

When understood, the symptoms that arise are rarely unfavorable. They can usually be quite satisfactorily explained to the patient and to all concerned; and the patient will soon show a condition more normal in so many ways that no other diet treatment will thereafter be countenanced by those interested. No physician reaps a greater reward of confidence on the part of his clientele than he who gets results along the line of correcting wrong habits of eating and living.

"When the system has been poisoned for years with wrong eating—wrong combinations—the habit is fixed, and nature defends the habit by making a demand for its restoration when it has been suspended. When the food-poisoned are deprived of their foods, and food combinations that have brought on the enervation that is at the bottom of their diseases, many of them suffer greatly; they declare they will famish; that they will go all-to-pieces; that they will surely starve to death; that they feel faint—feel like collapsing; they declare they are so w-e-a-k, that they must have more food or they will die.

When it is remembered how greatly all drug fiends suffer when the drug is taken from them, it takes but little imagination to realize that nerves must suffer more or less when deprived of any accustomed stimulation—less perhaps from foods than from drugs, but the line is not drawn very distinctly between foods and drugs; for coffee and tea, as well as condiments and spices, are drugs, and any food may be made to take the place of drugs under certain circumstances. The results of eating wrongly are the same as results from taking drugs; the effect is to overstimulate until enervation takes place. What is the condition in enervation? A general weakness that is in evidence all the time, except when the nervous system is under the influence of the poison that has brought it on, or under the effect of some other stimulant given as a relief or supposed cure.

It is hard for people, and even many doctors, to understand that great lassitude, and even loss of appetite, follows the giving up of the disease-producing foods, or the habits common to civilization, and the adopting of a natural, health-producing regimen. The disagreeable symptoms will be interpreted as coming from the change in food, and ignorance will advise a return to stuffing and erroneous food combinations, which, when done, *will bring great relief!* The same relief, however, that the whiskey and drug fiends experience in returning to their stimulants.

If the crime is using coffee until the disease results, the victim must suffer the pain of want, and the nervous system must suffer the pain that must come at first from the giving up of stimulants. The greater the poisonous action that the food or drug has had, the greater the suffering that must be experienced in giving up the habit.

Why are people with diseases brought on from this manner of eating so incurable? Because it takes so long after the habit is changed to get to feeling

right. Nature begins at once, as soon as the habits are righted, to get rid of the influences of wrong life, but, before the enervation is overcome and full strength returns, the patient suffers many hours from the distress of weakness and longing for stimulation."

(TILDEN).

MANAGEMENT OF CHILDREN

Only a limited discussion of this subject is undertaken and that chiefly with the object of leading to investigation. The book of Dr. J. H. Tilden on "Care of Children" gives many valuable ideas.

The naturalness of children is not understood by their parents. Adults usually forget their own childish emotions and impulses; they cease to play. Each child during his development passes through several well recognized epochs and during each of them he should be considered physically, mentally, socially and spiritually. There are periods in child life marked by the helplessness of little animals, by the tricks of monkeys, by positive selfishness, by a hatred of religion as known to adults, by much reading, by unusual courtesy, as an "anti" feeling against parents and some playmates, by the dim dawning of a discernible relation to a supreme being, etc. An understanding of these things is very helpful to the parent, and an appreciation of what they mean reveals the appalling danger of ignorance regarding them. There is much helpful literature written in this interest by men and women who are giving their lives to the noble youth of our country. The duty of knowing these things cannot be delegated by parent, not even to teachers of day or Sunday Schools, however important it be that they also are informed along these lines. Parents must not shun the responsibility of knowing their own children, of spending time with them, of playing with them.

Both before a child is born and during its nursing period it is very much influenced by its mother's mode of living and her diet. If the mother eats too much

and is too heavy the child will very likely be too fat and too much stimulated. It will be born accustomed to too much stimulation and will welcome highly flavored and highly seasoned foods. It will be precocious in many respects and a dullard in others. Overstimulated children develop sexually much earlier than they should, be that stimulation from food, improper reading matter, or foul-mouthed playmates. The excessive consumption—first by the mother and later by the child—of stimulating foods and those which unduly ferment and decompose, leads to the ruin of many a boy or girl. It destroys wholesome and natural impulses and exposes the flexible, developing nervous system to “all the storms of unsatisfied desire.” And in a great many of these sad cases the child is not morally culpable, but is the innocent victim of abnormal physical impulses forced upon it by continuous excessive food stimulation. Not a few children as they develop into womanhood or manhood overtax the nervous system in a futile attempt to maintain self-restraint in spite of such abnormal impulses, and this lamentable condition is very often the direct result of bad habits of eating taught in infancy and early childhood—a tremendous indictment of dietary ignorance.

A prospective mother should eat but three meals a day and those moderate in amount. She does not have to “eat for two”—that idea is merely a seductive emanation from him whom the Good Book declares to be “a liar, and the father of it.” If she eats a bite more than she can properly digest, she fails to eat properly for one. A little food well digested will furnish nutritious material pure in quality while either little or much, if poorly digested, supplies poisons.

An infant should sleep nearly all the time. It should not be awakened for food or anything else. Handling it unnecessarily, showing it off, taking it on journeys and to parties, are measures not conducive to health.

"Mothers cannot heed the injunction too strictly of securing twenty-three and a half hours' sleep out of every twenty-four for the first few weeks, and at all times avoiding the silly practice of making a show of a baby.

Children a year old should sleep half the day and all the night. After the second year, parents should see to it that children up to seven years of age sleep one or two hours each forenoon and two hours in the afternoon. They should be put to bed at seven or eight o'clock on summer evenings, and seven o'clock on winter evenings. Six o'clock is the proper time to get up of a summer morning, and seven o'clock during the cold weather." (TILDEN).

From its first day on a child should be offered water frequently. At any sign of restlessness between the regular feeding times a little unseasoned warm water should be offered. Infants often suffer from lack of water and take food offered them because they are thirsty and not because of hunger. If an adult takes a liquid food instead of water to slake thirst it will make him sick; yet this is just the treatment that is thoughtlessly administered to many a helpless infant incapable of protesting. Water is the only thing that a child should be permitted to drink; any liquid food should be sipped or nursed from a nipple.

From the first a baby should be fed but three times a day and not at all at night. The extreme number of times should be four; at six, ten, two, and six o'clock.

If the child is thriving on the mother's milk, let well enough alone. Do not give it even a taste of other food until it closely approaches weaning time.

If the child is not getting enough nourishment from the mother, a small amount of cow's milk, diluted with water, may also be given. But before any substitute food is given, the mother should, by bringing her mode of life and diet into accord with the fundamental truths herein set forth, and attention to any other treatment her condition may need, make her utmost endeavor to supply her child sufficient wholesome breast milk. The cow's milk when needed, may be given undiluted in very small quantities at first, only a few spoonfuls in addition to the mother's milk; or it may be diluted with water, or modified in the usual manner.

If for any reason other food is to be given, it should be the juice of raw fruits or uncooked vegetables. If four feedings are given, the fruit or vegetable juice may be given at ten or two. Fruit juice may be used one day and vegetable juices the next. The juices should not be seasoned. Oranges, apples, grapes, pineapples, dewberries, blackberries, and raspberries are among the leading fruits for this purpose and the blackberry, dewberry and pineapple are the choice of these. Press out the juice and permit the child to take what it likes from a spoon, or from a nipple. For the next day crush the juice from any of the non-starchy vegetables and feed it without seasoning. Lettuce, celery, onions, carrots, turnips, cabbage, and cucumbers, especially the last named, are among the best. When the child is weaned, the feeding of both raw and cooked vegetable and fruit juices should

be instituted, and a small amount of the fruit and vegetables may soon be used.

There are many mothers and physicians who will decry such feeding, but who will permit the use of richly buttered mashed potatoes, eggs, toast, crackers (factory baked and raised with alum or ammonia), and then add soda and magnesia to help the baby digest the food! A little thinking will justify the conclusion that these vegetable and fruit juices are far more desirable for the infant stomach than any starch or rich protein, and a little experience with this plan of feeding will be convincing. Many will condemn this idea without either experience or observation of its actual application, but the few with the courage to adopt it will soon read an unmistakable verdict of approval in the dimpled and rosy cheeks of the little ones.

No exact rule can be made covering the amount a child should be given, but it can be truthfully and emphatically asserted that most children are fed too much, chiefly as the result of feeding too often. When accustomed to the routine of but three or four meals a day the child can safely be permitted to eat the amount desired. But if it is fed every two or three hours, day and night, it will certainly be overfed, even though the amount of each feeding is small.

A young child should do some crying for exercise. But in this day of keen and strenuous competition people do not live normal lives, and for this reason children often cry and fret excessively even if fed as herein directed. They suffer from nervous influences over which they have no control, and which antedate birth. Diet, though most important, is not everything.

There are circumstances requiring the baby to be fed from a bottle. Cow's milk is the best substitute for mother's milk. It may be modified, the best way being to dilute with water and try, continuing the dilution until it agrees with the child.

"Try first the addition of a quantity of water equal to the milk. It is quite rare that the proportion of water should be less than this. Frequently, the quantity should be three or four times as great as the quantity of milk. And if the little one still vomits, give instead of milk at every feeding, once or twice a day, buttermilk. This is particularly grateful to most sensitive stomachs. If, notwithstanding this management, there is derangement of the digestive apparatus, try, occasionally, diluted cream, for there are often found conditions of the stomach, in these half motherless ones, with which the cheese matter of cow's milk does not agree. The hundred and one substitutes which are sold at the drug stores and groceries are but poor, un-nutritious, unsatisfactory stuffs." (DIO LEWIS).

The difference between mother's milk and cow's milk would not be so great if mothers lived a more normal life and if their food were better suited to their needs. One of the chief differences is the sugar content, and if the mother ate no more sugar than does the cow, breast milk would not be so rich in sugar and would be much more healthful for the infant. The infant should have to work for its food by pulling hard on the nipple, instead of gulping it down in large mouthfuls. After the nipple is put aside the milk should be sipped from a spoon. As it is easier to take it in this manner from a bowl than from a glass, it is well to serve it in a bowl.

The food for the first year may be nothing but milk. But if anything additional is used it should be

only the juices of fruits and vegetables as herein explained. And sometimes it is important to use them. In any case showing malnutrition or symptoms of rickets these vegetable and fruit juices should be used. In some cases of constipation they may be used with advantage.

The starchy foods should not be given in any form until the child is almost a year old. As one of the first foods of this nature yeastless bread in the form of dry toast, or a few crumbs of dry grapenuts may be given at the time of feeding the milk. These should not be given oftener than once a day during the second year. The toast should be given without moistening it with milk or liquids of any nature, and the child should be given abundant time in which to eat. It should not be hurried through its meal so the dishes may be cleared away, or for any convenience of adults. Such a measure may be instituted a short time before the weaning process is begun. This will teach the child to chew starches. It will eat but a small quantity at first and this will be digested quite a little in the mouth. During the second year this may wisely constitute about all the rich starchy food given, and if for any reason any other starch is used it should be something that requires chewing, such as baked potato given dry or with but a light covering of butter. Fruits and non-starchy vegetables, raw and cooked, may be added to the dietary of the child during the second year, but milk should still compose the bulk of the diet. People in general eat too much cooked foods, and it is a serious mistake of falling into the habit of giving a young child a diet composed largely of cooked stuff. Milk, with cottage cheese and an occasional egg, should

constitute the protein diet at this age. Sugar, and foods in which it is freely used, should be kept from children under three years. Starchy foods sweetened with sugar are a fruitful source of adenoids, diseased tonsils, enlarged glands of the neck, skin diseases, and all catarrhal and glandular affections in young children.

In the third year the amount of starch may be increased, giving two meals of starch on each of two or three non-consecutive days during the week. An occasional meal of the rich protein foods may be given in the third year, but it should be remembered that protein is constantly given with the starch meals in the form of milk, and it should be emphasized that the healthful child with normal eating habits should not be limited in the quantity of milk eaten in its early life.

In making up starchy menus it is well in the early part of the second year to have starch and milk compose the entire meal. Later on, when other foods are added, combining rules should be the same as for adults. If children are given vegetable juices early they will not need to be trained to enjoy vegetables; but if they will not otherwise be eaten such training becomes a necessity. Parents must teach and control their children, and one who fails in this is not a friend of the child, for such default but paves the way to illness, disappointment and discontent. Lack of parental control in other matters leads to disease in children just as surely as do wrong habits of eating. The better the understanding between parent and child, and the greater the former's appreciation of the child's desires, emotions, and viewpoint, the less restraint is required.

In the third year, when full meals of protein are given, combine as for adults. If such habits are early formed, a child will eat eggs without just as readily as with bread. These customs are largely matters of habit. The egg should be used as the basis of a protein meal. Children brought up in this manner are not likely to use too great a variety of foods at one time. They will frequently satisfy their hunger with one food, and this is proper, provided, of course, that the same food is not eaten at a number of consecutive meals.

When osteopaths give more attention to the diet and general care of infants and children more of such will be placed in their care. No other physician will then succeed in scaring parents about the "heavy hand and killing treatment" of a careful osteopathic physician. At the present writing the author is caring for six. Three of these are less than four years old and have serious hemorrhoidal conditions. One is only one month old, but, like all the rest, is suffering from bowel disturbance. In all such cases the prominent features of any treatment should be care and diet. The osteopathic manipulative treatment for these little ones is welcomed by and helpful to them, but any thoughtful person will understand that the osteopathic bony lesion is not the cause of these troubles in infants except rare cases. According to the best medical authorities drugs are not indicated, but in practice physicians do not always heed the best authorities. Giving soda and magnesia to these children to allay symptoms is drugging them in a harmful and wholly inexcusable manner.

INDEX

Acid-forming foods,

- Elements determining acidity, 114.
- Which ones are, 113, 115.

Air, 117,

- Baths, 121.
- How poisoned, 17.
- How purified, 118.
- More valuable when in motion, 118.
- Ventilation, 119.
- Vitalized, 117.

Alcohol,

- Harmful, 31, 32.
- Quantity used fluctuates with that of sugar, 88.

Alcohol and Sugar, 88.

Alkali-forming foods,

- Elements determining alkalinity, 114.
- Which ones are, 113, 115.
- Why sour fruits are, 114.

Appetite, 50,

- Abnormal, means disease, 51.
- Defined, 51.
- When lost, causes undue anxiety, 50.

Apple dumplings,

- Directions for their use, 128.

Apples, 108.

Bacon,

- A fat improved by curing process, 110.

Bananas, 84,

- Classified, 84.
- How to bake, 85.
- When best for food, 84.

Beans,

- Eaten to excess, 80.
- Green, classified, 73.
- Mature, classified, 72, 111.

Biliousness,

- Its meaning, 95, 97.
- One cause of, 95.

Blood,

- Heals, 27.
- Improved by diet, 141.
- Its alkalinity reduced by vaccination, 18.
- Its alkalinity reduced by drugs, 30.
- Work of white cells, 14.

Bran, 111,

- How to use it, 112.

Bread,

- A food largely assimilated, 46.
- Harmful, when raised with yeast, 82.
- The best kind, 83.

But Little Food Necessary, 52.

Buttermilk,

- Modern way to make it, 139.
- Valuable food, 139.

Cabbage, 101,

- Cooking of, 103.
- To be valued, 101.

Calomel,

- Does not act on liver, 41.

Candy,

- How best to use it, 129.
- Not needed, 86.
- Unsuited to stomach, 85.

Cane and Beet Sugars, 86.

Celery,

- Much should be eaten, 59, 103.

Cereals,

Prepared, classified, 81.

Cheese,

Not constipating, 45.

Quantity limited, 91, 126.

Supplies protein, 91.

Chocolate,

An unhealthful drug, 29.

Its occasional use, 30.

Children,

Constipated, 41.

Diet, first year, 155-158.

Diet, second year, 159.

Diet, third year, 160, 161.

Feeding them when sick, 50.

Indications of disease in, 65.

Management of, 153.

Not understood, 153.

Chewing. (See Mastication.)

Clabber. (See Buttermilk.)

Clothing,

Suitable changes in, 120.

Cocoa,

An unhealthful drug, 29.

Its occasional use, 30.

Coffee,

An unhealthful drug, 29.

Its occasional use, 30.

Colon,

Magnitude its disturbance assumes, 66.

Needs rest to restore tone, 56.

Combinations,

- Harmonious with fruit, 107.
- Harmonious with non-starchy vegetables, 100.
- Harmonious with protein, 93.
- Harmonious with starch, 75.
- Incompatible with fruit, 108.
- Incompatible with non-starchy vegetables, 100.
- Incompatible with protein, 94.
- Incompatible with starch, 76.
- Proper ones, very important, 75.
- Results of proper ones known only by the few, 78.

Constipating foods,

- Term incorrectly used, 45.

Constipation,

- Causes of, 30, 40, 41, 56, 148, and others.
- Defined, 39.
- Effects of, 41, 42.
- How to cure, 42, 43, 44.

Contagion,

- Explained, 16.

Cooking of,

- Bananas, 85.
- Non-starchy vegetables, 59, 103, 104.
- Protein, 95.
- Starch, 83.

Cucumbers, 100.

Daily Dietary, 121.

Deceptive Nature of Certain Disturbances, 64.

Dietary,

- For prospective mother, 154.
- Should be understood, 132.
- "Well Balanced", 36.

Dietetic principles,

- How to apply them, 130.
- Loosely followed, 130, 131.
- Not wholly different for each disease, 134.

Disease,

- Angle from which it should be studied, 68.
- Clear picture of viewed only by drugless healers, 150.
- Deceptive nature of, 64.
- Factors determining its character, 15.
- Nature of, 61.
- Not an entity, 61, 62.
- Not inherited, 30.
- Not specific, 30.
- Signs of, 41, 47, 51, 54, 62, 63, 65, 67, and others.
- Similar, 15, 62.
- To prevent those of Spring, 122.

Drugs, 24,

- Act as poisons, 27.
- Are constipating, 40.
- Are not healing, 27.
- Are not tolerated, 27.
- Depress, and retard recovery, 27.
- Do not cure, 26.
- Reduce the alkalinity of the blood, 30.
- Why used, 24.

Eat More Non-Starchy Vegetables, 98.

Eggs,

- How to cook them, 95.
- Supply protein, 91.

Elimination,

- Assisted by germs, 21.
- Effect of emotions on, 49.
- Effect of drugs on, 28, 29.

Enema,

- Its use and how taken, 44.

Fasting, 142,

- Compelled by Nature, 143, 145.
- Short ones favored, 143.
- Should be understood by physicians, 142.
- Unwise without trained supervision, 143.

Fat, 109,

Bacon, 110.

Effect of heating, 110.

Fear,

Destructive agent, 47.

Fearlessness to be cultivated, 47.

Flesh Food Protein, 91.

Foods and Their Combinations, 71.

Food,

Amount needed, 37.

But Little Necessary, 52.

Does not cure, 76, 133.

How classified, 71.

Ignorance of, 8.

Its presence in stomach calls forth power, 53.

Leguminous, 111.

Liquids should be sipped, 116.

Miscellaneous, 111.

Not constipating, 45, 46.

Not source of strength, 52, 53, 145.

Overeating of, 54.

Rich in protein, 72.

Rich in starch, 72.

Rich in sugar, 85, 88, 89.

Simple ones most valuable, 37.

Tables, value of, 36.

Thought not harmful, 67.

Use of, 52.

What kind needed, 133.

When not to be taken, 123.

Fruit, 105,

Apples, 108.

How ruined, 59.

In acid conditions of the system, 106, 115.

Injured by cooking, 78.

Juices, value of, 105.

Melons, 109.

Raw ones best, 78, 106.

Rhubarb, 109.

Tomatoes, 109.

Fruit and Milk, 107, 138.
Fruit and Vegetables, 140.
Fruit Juice Diet, 136.
Fruit Meals,

Defined, 121, 126.
Menus, 126.

Fruit Sugars. (See Sweets.)
Full Meal,

Defined, 121.

Germs, 13,

Do not determine the disease, 15.
Erroneous theories of, 13, 22.
Condemned without evidence of guilt, 14, 15, 20, 21, 23,
Function of, 14, 22, 56, 57.
Help in elimination, 21.
Not injurious, 20.
Of diphtheria in healthful throats, 23.

Grapenuts, 81.

Grief, 49.

Glucose. (See Sweets.)

Harmonious combinations with,

Fruit, 107.
Non-starchy vegetables. 100
Protein, 93.
Starch, 75.

Honey. (See Sweets.)

How to Apply Dietetic Principles, 130.

How to Cook Non-starchy Vegetables, 103.

Ice Cream, 98,

As a dessert, 124, 125.

Illustrative Menus, 121.

Immunity, 17, 21.

Incompatible combinations with,

Fruit, 108.

Non-starchy vegetables, 100.

Protein, 94.

Starch, 76.

Indulgences, 127.

Iron, 24.

Jealousy, 49.

Laxative drugs constipating, 40.

Leguminous foods, 111.

Lentils, 111.

Lettuce,

Much should be eaten, 59, 103.

Light Meal,

Defined, 121.

Loss of weight,

From reduced diet, 148.

Malaria,

Not caused by mosquito, 13.

Malted Milk, 97,

As sweetening, 79, 97, 108, 153.

Management of Children, 153.

Maple Sugar. (See Sweets.)

Mastication of,

Cabbage, 101.

Meat, 92.

Onions, 102.

Radishes, 101.

Starch, 74, 82.

Vegetables, 99.

Meal,

Fruit, defined, 121.

Full, defined, 121.

Light, defined, 121.

Number of, needed daily, 122.

Plan of taking full and light ones, 122, 123, 127.

Protein, defined, 121.

Should not be "balanced", 36, 37.

Starch, defined, 121.

Vegetable, defined, 121.

"Well balanced", 36.

Meat Not Harmful, 91.

Meat, 91,

Cooking of, 96.

Medical Profession,

Crazy about germs, 8.

Originates fallacies, 19.

Teaches incorrect ideas, 10, 13, 19, 24, 25, 50.

Leaves to others the corrections of its mistakes, 25.

Medical Schools,

Do not teach the subject of correct habits of eating and living, 8.

Medicine,

Its basic principle, 35.

Melons, 109.

Mental Attitude, 47,

Affects digestion, 47, 132.

Menus,

Fruit, 126.

Illustrative, 121.

Protein, 124.

Starch, 123.

Vegetable, 126.

Milk Diet, 141.

Milk, 96,

Combines properly with fruit, 97, 107, 108.

Injured by heat, 95.

Should be sipped, 108, 116, 155.

Mineral Elements. (See Tissue Salts.)

Miscellaneous Foods, 111.

Nature,

Her advice not heeded, 51.

Her danger signals ignored, 63.

Her slightest warnings important, 66.

Her ways not understood, 50, 52.

Nature of Disease, 61.

Non-starchy vegetables, 72,

Bland and soothing, 141.

Chewing of, 99.

Cooking of, 59, 103, 104.

List of them, 72.

Supply fibre and chemicals, 46, 99.

Supply tissue salts, 98.

Supply vitamins, 98.

Supply alkalies, 114, 115.

Office of Food, 52.

Onions, 102.

Cooking of, 103.

Osteopathic lesion,

Defined, 33.

Source of disease, 14, 33.

Osteopathy,

Helpful to all diseases, 34.

Its fundamental principle, 35.

Most comprehensive system of medicine, 35.

Overeating, 54,

As related to the emotions, 58.

Causes and cure of, 58, 59, 61, 65, 74, 80, 81, 82, 94, 99, 107.

Defined, 55.

Disease-forming habit, 31, 38, 45, 54, 56, 61.

Effect on intestines, 56.

Universal, 55.

Pancakes, 127.

Parents,

Need health information, 7, 8, 9, 65, 153.

Do not understand their children, 153.

Must control their children, 160.

Patients,

Expect results too soon, 133, 151, 152.

Not looking for advice, 10.

Should be freed from false notions, 11, 12.

Should investigate for themselves, 11.

Peach cobbler, 128.

Peas, 111,

Easily taken in excess, 80, 81.

Physicians,

Choosing of, 9.

Crazy about germs, 8.

Need health information, 8, 66, 132.

Only few prepared to teach their clientele, 9, 66.

Should be honest, 9.

Should teach their clientele, 9, 11, 134, 140.

Show hostile attitude toward teaching of correct habits of living, 9.

Task of, 10, 11, 132, 133, 147.

Treat symptoms, 16, 63.

Pickles, 111.

Pies, 128.

Plum pudding, 128.

Poisons,

Cause of disease, 13, 16, 18.

Potatoes,

Fried, 84.

With gravy, 84.

Used as bread, 83.

Power,

Source of, 53.

Prepared Cereal Foods, 81.

Prevent Excessive Fermentation, 82.

Protein, 90.

Cooking of, 95, 96.

Digested in acid medium, 80.

Flesh food, 91.

Use less, 90.

Protein Foods,

A list of, 72.

Protein Meals,

Defined, 121.

Menus, 124.

Pumpkin, 111.

Radishes, 101.

Raisins,

As sweetening, 79, 108.

In bread, 79.

Raw Fruit Best, 106.

Regular Diet, 121, 138, 140.

Rhubarb, 109.

Rich Starch Foods, 72.

Rich Protein Foods, 72.

Salads,

Recipes for, 102.

Salt. (See Sodium Chloride.)

Sanitation,

Commended, 19.

Explains results in typhoid, 18.

Internal, needed, 18.

Self-pity, 49.

Shredded Wheat Biscuit, 81, 82.

Sipping of liquid foods, 116, 155.

Skin,

Care of, 117, 119, 121.

Sleep,

Its function, 53.

Soup,

Recipe for vegetable, 104.

Sodium Chloride, 115.

Sorghum. (See Sweets.)

Special Diets and Fasting, 135.

Special diets, 135,

Advantages of, 135, 141.

Fruit juice, 136.

Fruit and milk, 138.

Fruit and vegetables, 140.

Milk, 141.

Starch, 73,

Changed to sugar, 79.

Cooking of, 83.

Digested in alkaline medium, 75.

Ferments easily, 57, 76, 82.

Granular, 71.

Milk, 71.

One substituted for another, 82.

Use less, 73.

Why so popular as a food, 73.

Starch Foods,

A list of, 72.

Starch Meals,

Defined, 121.

Menus, 123.

Strawberry Shortcake, 128.

Sugar. (See Sweets.)

Sweets, 85,

Beet sugar, 86.

Cane sugar, 85, 86.

Ferment easily, 85, 86.

Fruit sugar, 85, 89.

Glucose, 87.

Honey, 79, 89.

Maple sugar, 89.

Mineral matter removed, 87.

Not healthful, 31, 79, 85, 86, 108.

Sorghum, 87.

Taste,

How impaired, 99.

Subject to training, 99.

Tea,

An unhealthful drug, 29.

Its occasional use, 30.

The "Well Balanced" Dietary, 36.

Tissue Salts, 47, 113.

In honey, 89.

In maple sugar, 89.

In non-starchy vegetables, 98.

In fruit, 45, 89, 105.

Maintain alkalinity of the blood, 113.

The need of them, 82, 87.

Tobacco,

An unhealthful, poisonous drug, 31.

Tomatoes, 109.

Troublesome Symptoms, 146.

Use More Fruit, 105.

Use More Non-starchy Vegetables, 98.

Use Less Protein, 90.

Use Less Starch, 73.

Vaccination, 9, 18.

Vegetables, Non-starchy, 98.

Vegetable Meal,

Defined, 121.

Menus, 125.

Vegetable Soup, 104.

Ventilation, 119.

Viewpoint and General Principles, 5.

Vinegar, 111.

Vitalized Air, 117.

Vitamines, 98.

In honey, 89.

Water, 115,

Quantity required, 116.

Worry, 48.

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